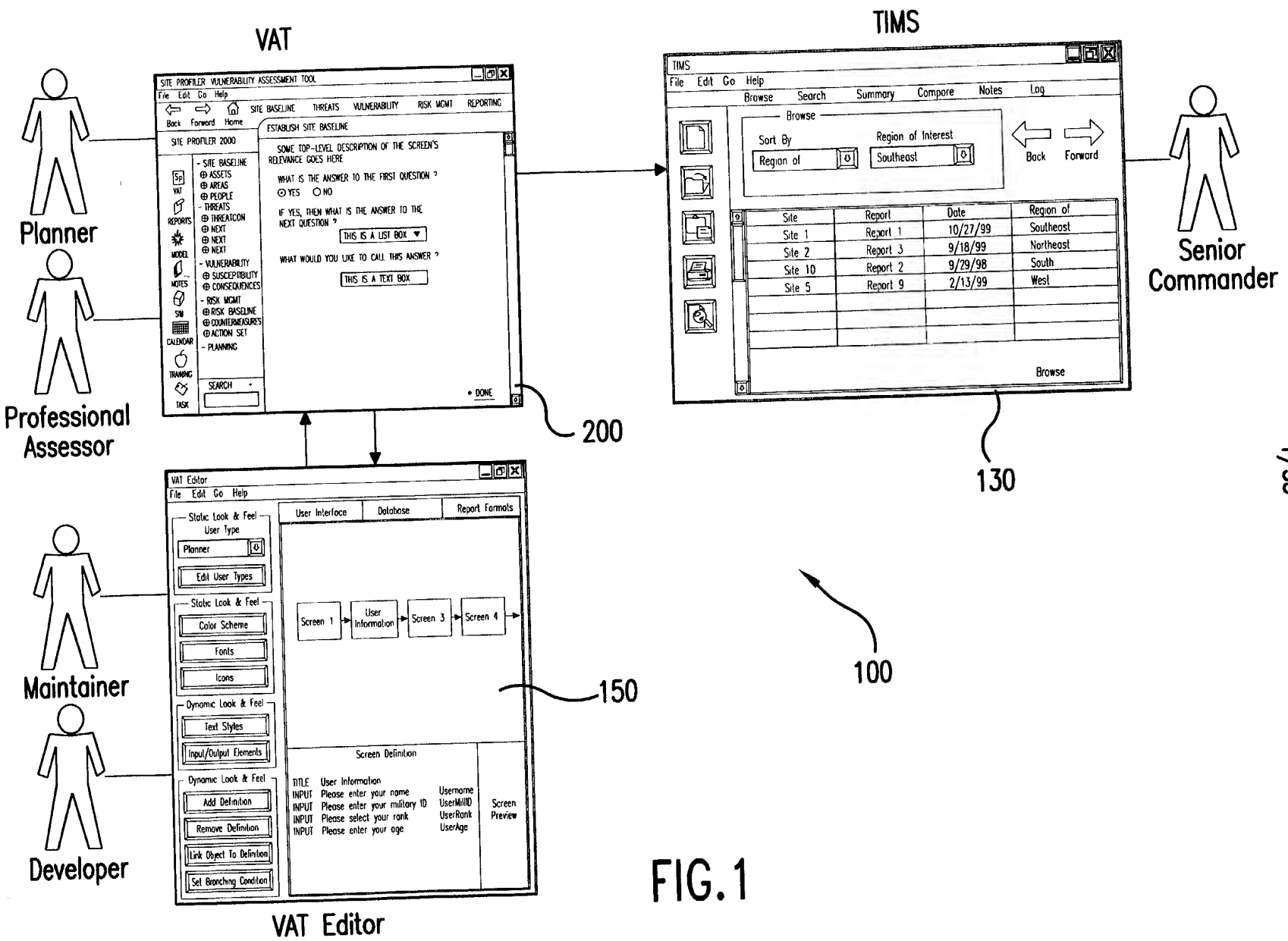

VAT
TIMS
Planner
Professional Assessor
Maintainer
Developer
Senior Commander
SITE PROFILER VULNERABILITY ASSESSMENT TOOL
File Edit Go Help
SITE BASELINE THREATS VULNERABILITY RISK MGMT REPORTING
Back Forward Home
SITE PROFILER 2000
ESTABLISH SITE BASELINE
SOME TOP-LEVEL DESCRIPTION OF THE SCREEN'S RELEVANCE GOES HERE
WHAT IS THE ANSWER TO THE FIRST QUESTION ?
YES NO
IF YES, THEN WHAT IS THE ANSWER TO THE NEXT QUESTION ?
THIS IS A LIST BOX
WHAT WOULD YOU LIKE TO CALL THIS ANSWER ?
THIS IS A TEXT BOX
DONE
200
TIMS
File Edit Go Help
Browse Search Summary Compare Notes Log
Browse
Sort By
Region of
Region of Interest
Southeast
Back Forward
Site Report Date Region of
Site 1 Report 1 10/27/99 Southeast
Site 2 Report 3 9/18/99 Northeast
Site 10 Report 2 9/29/98 South
Site 5 Report 9 2/13/99 West
Browse
130
VAT Editor
File Edit Go Help
Static Look & Feel
User Type
Planner
Edit User Types
Color Scheme
Fonts
Icons
Dynamic Look & Feel
Text Styles
Input/Output Elements
Add Definition
Remove Definition
Link Object To Definition
Set Branching Condition
User Interface
Database
Report Formats
Screen 1
User Information
Screen 3
Screen 4
Screen Definition
TITLE User Information
INPUT Please enter your name Username
INPUT Please enter your military ID UserMilID
INPUT Please select your rank UserRank
INPUT Please enter your age UserAge
Screen Preview
150
100

FIG. 1

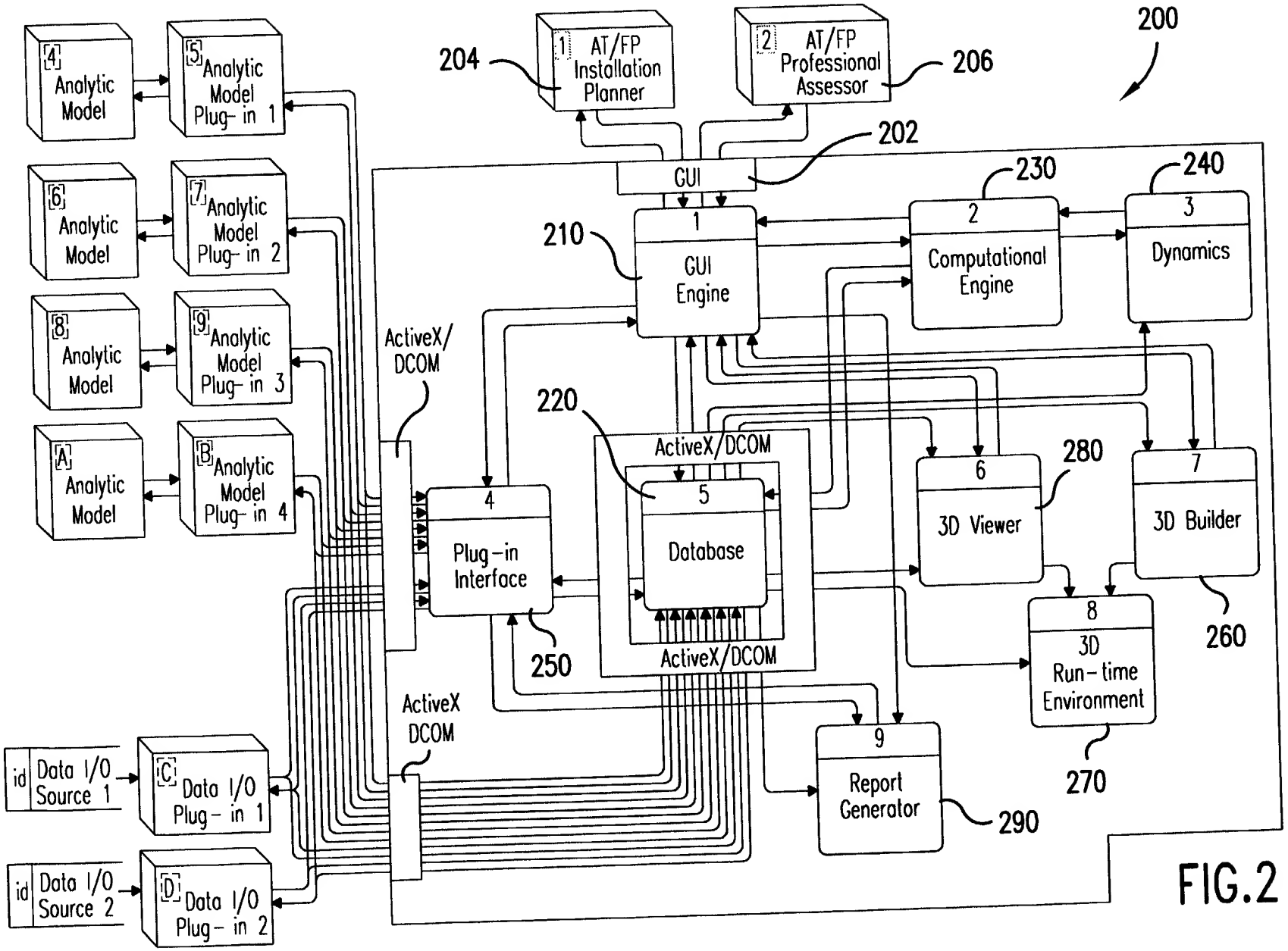

200
204
206
202
210
220
230
240
250
260
270
280
290
1 AT/FP Installation Planner
2 AT/FP Professional Assessor
GUI
1 GUI Engine
2 Computational Engine
3 Dynamics
4 Plug-in Interface
5 Database
6 3D Viewer
7 3D Builder
8 3D Run-time Environment
9 Report Generator
ActiveX/DCOM
ActiveX/DCOM
ActiveX/DCOM
4 Analytic Model
5 Analytic Model Plug-in 1
6 Analytic Model
7 Analytic Model Plug-in 2
8 Analytic Model
9 Analytic Model Plug-in 3
A Analytic Model
B Analytic Model Plug-in 4
id Data I/O Source 1
C Data I/O Plug-in 1
id Data I/O Source 2
D Data I/O Plug-in 2

FIG.2

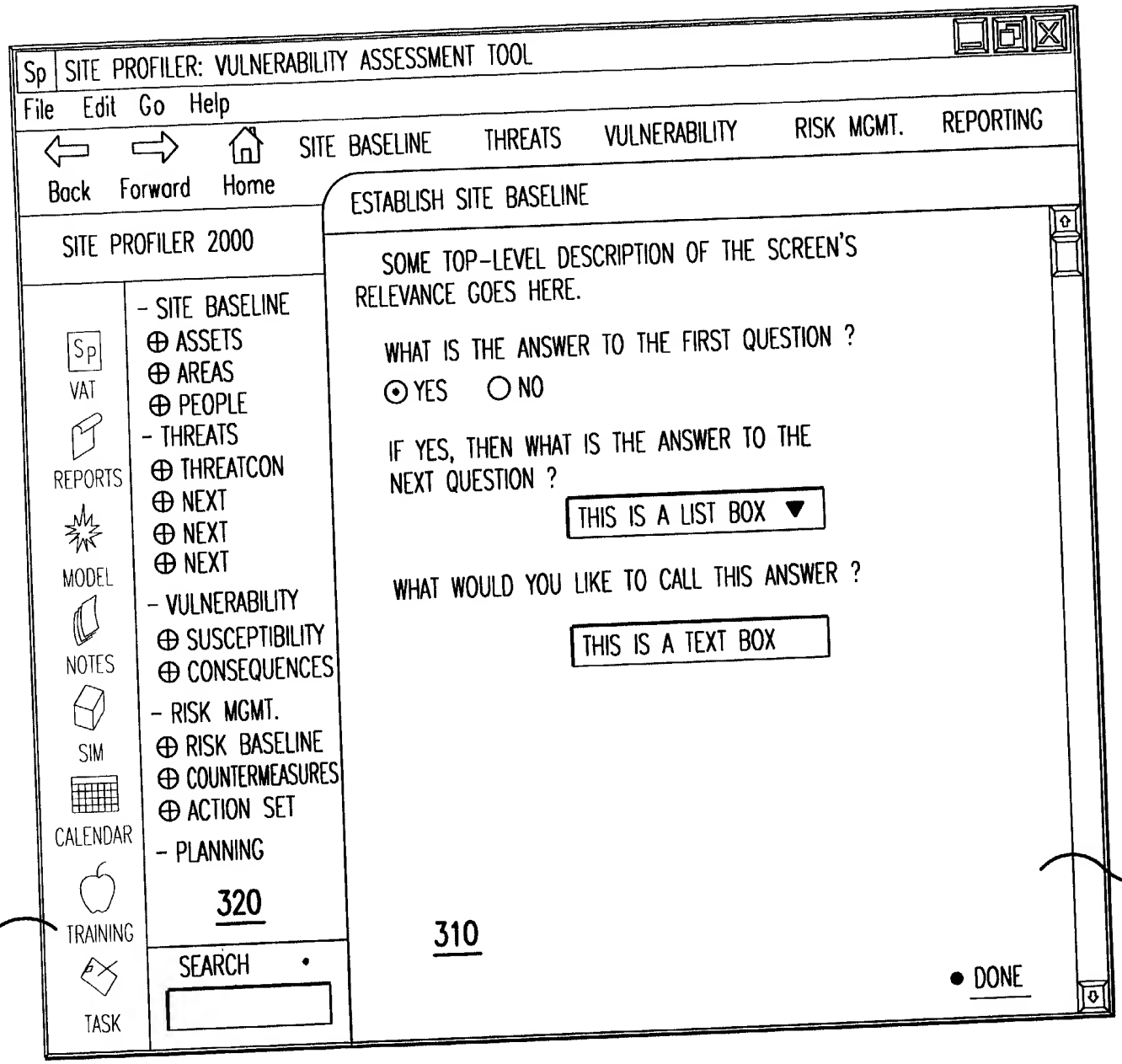

Sp SITE PROFILER: VULNERABILITY ASSESSMENT TOOL
File Edit Go Help
Back Forward Home
SITE BASELINE
THREATS
VULNERABILITY
RISK MGMT.
REPORTING
SITE PROFILER 2000
ESTABLISH SITE BASELINE
SOME TOP-LEVEL DESCRIPTION OF THE SCREEN'S RELEVANCE GOES HERE.
WHAT IS THE ANSWER TO THE FIRST QUESTION ?
YES
NO
IF YES, THEN WHAT IS THE ANSWER TO THE NEXT QUESTION ?
THIS IS A LIST BOX
WHAT WOULD YOU LIKE TO CALL THIS ANSWER ?
THIS IS A TEXT BOX
- SITE BASELINE
⊕ ASSETS
⊕ AREAS
⊕ PEOPLE
- THREATS
⊕ THREATCON
⊕ NEXT
⊕ NEXT
⊕ NEXT
- VULNERABILITY
⊕ SUSCEPTIBILITY
⊕ CONSEQUENCES
- RISK MGMT.
⊕ RISK BASELINE
⊕ COUNTERMEASURES
⊕ ACTION SET
- PLANNING
320
VAT
REPORTS
MODEL
NOTES
SIM
CALENDAR
TRAINING
TASK
SEARCH
310
DONE
300
330

FIG.3

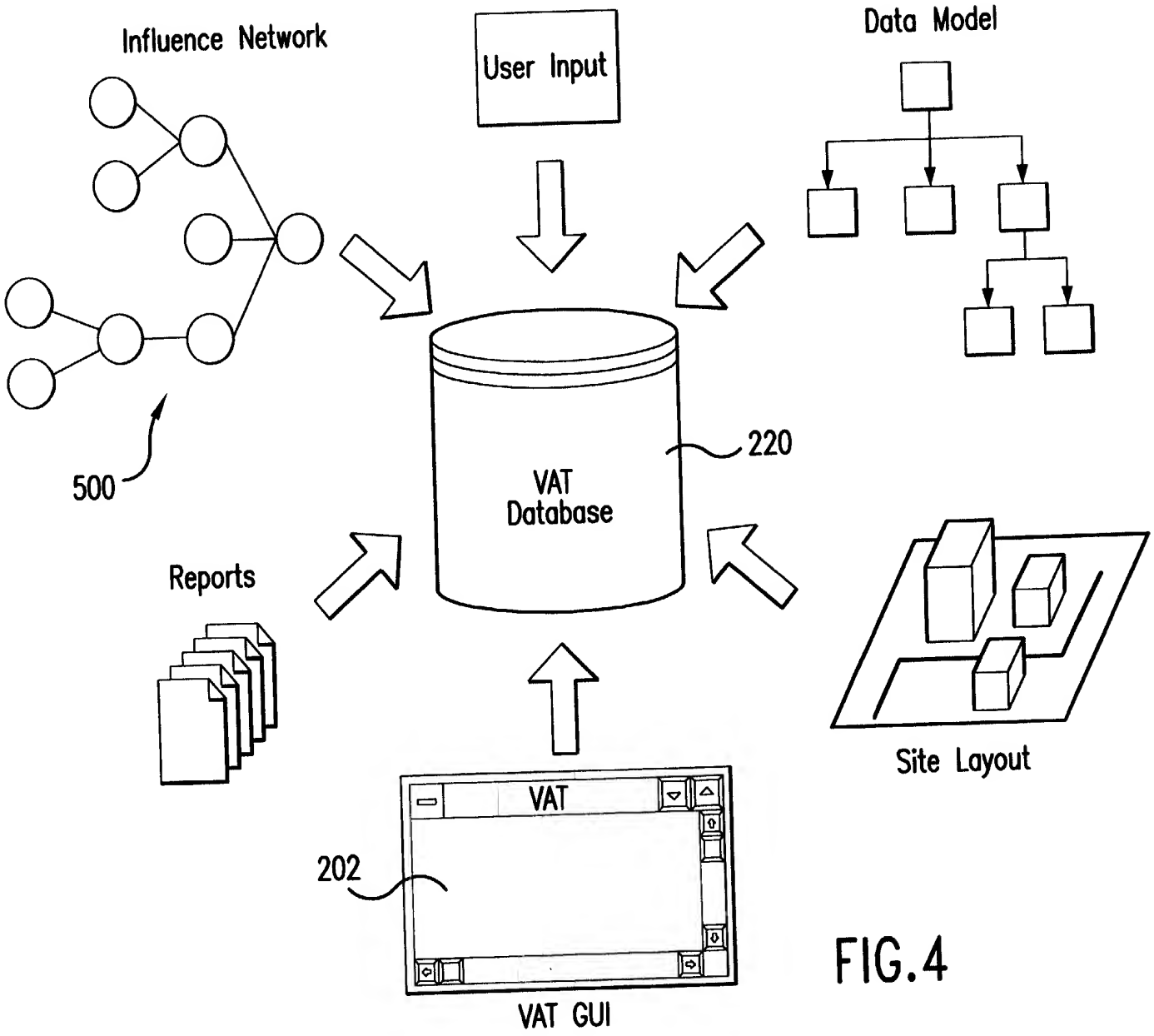

Influence Network
User Input
Data Model
500
220
VAT
Database
Reports
Site Layout
VAT
202
VAT GUI

FIG.4

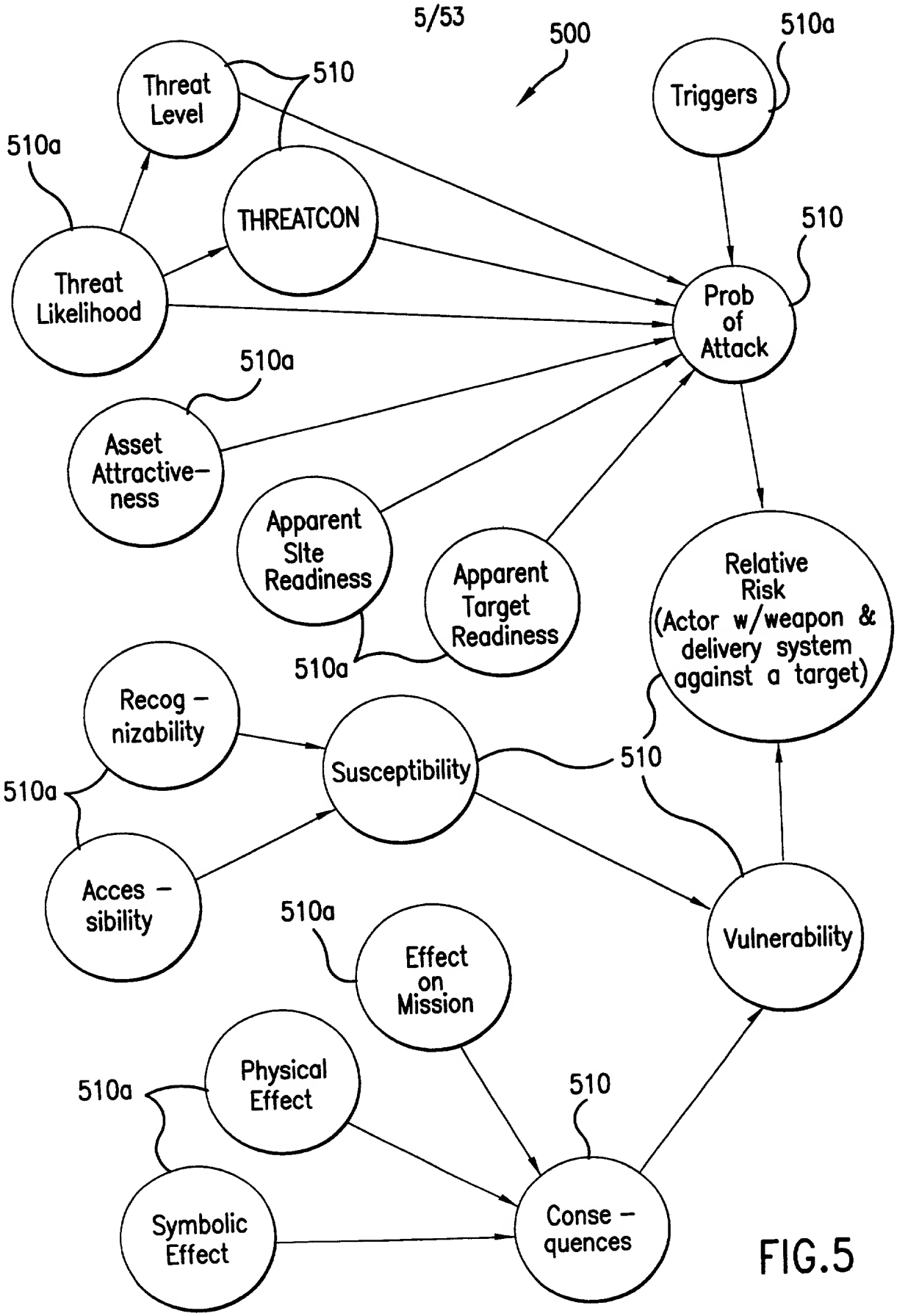

500
Threat Level
510
510a
Triggers
510a
THREATCON
Threat Likelihood
510a
510
Prob of Attack
Asset Attractive-ness
510a
Apparent Site Readiness
Apparent Target Readiness
510a
Relative Risk (Actor w/weapon & delivery system against a target)
Recog - nizability
510a
Susceptibility
510
Acces - sibility
510a
Effect on Mission
Vulnerability
Physical Effect
510a
510
Symbolic Effect
Conse - quences

FIG.5

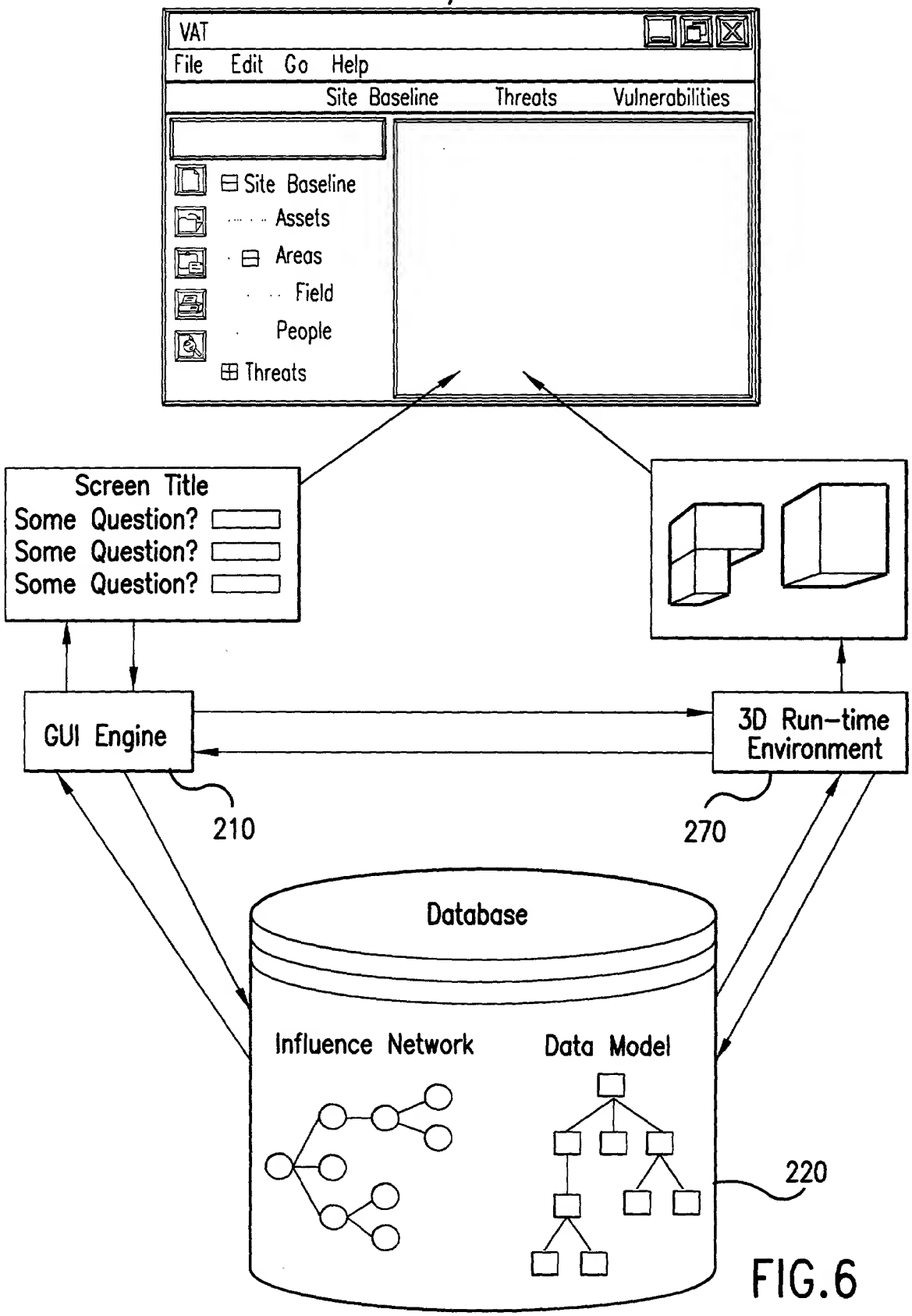

VAT
File Edit Go Help
Site Baseline
Threats
Vulnerabilities
Site Baseline
Assets
Areas
Field
People
Threats
Screen Title
Some Question?
Some Question?
Some Question?
GUI Engine
3D Run-time Environment
210
270
Database
Influence Network
Data Model
220

FIG.6

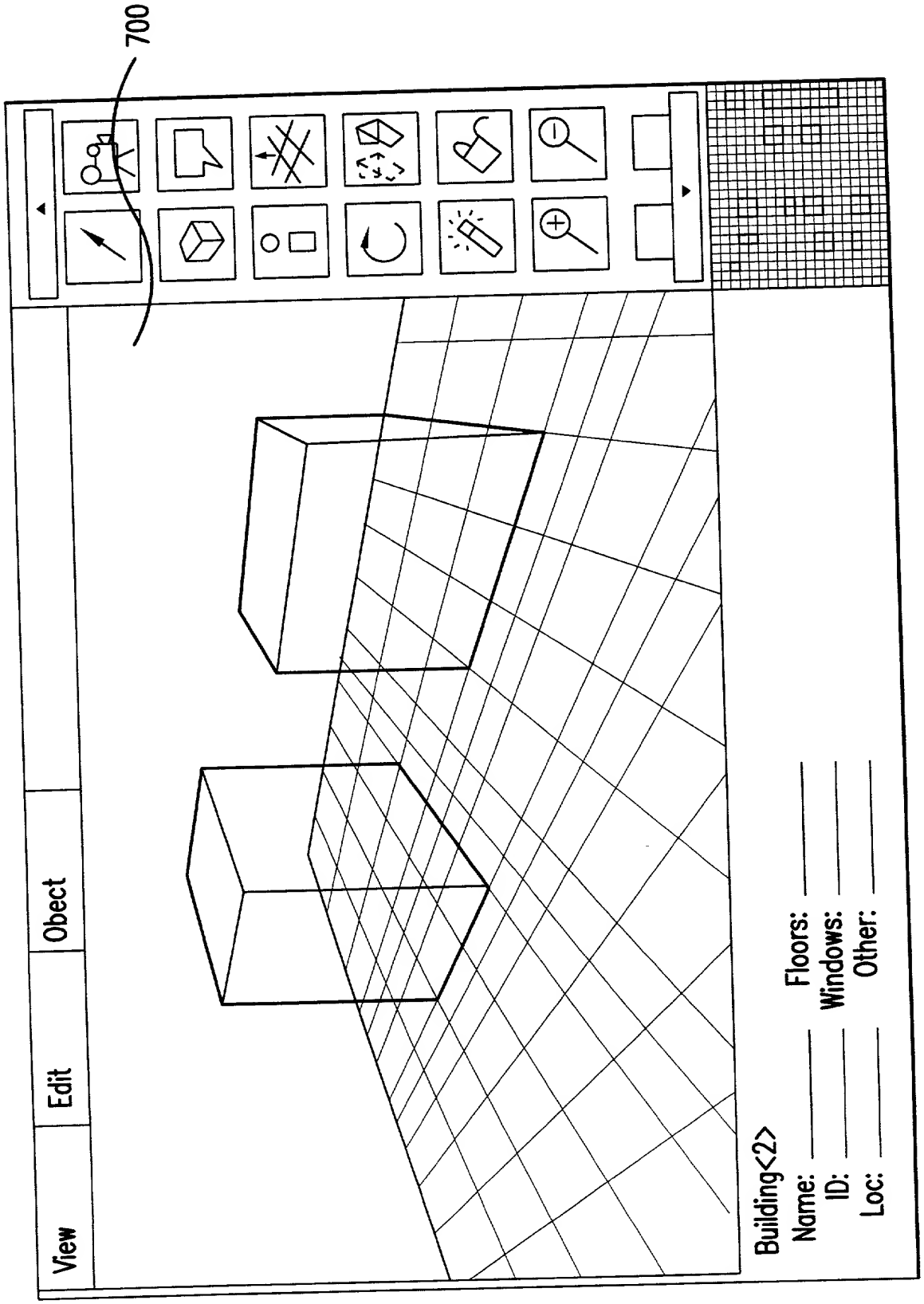

700
View
Edit
Obect
Building<2>
Name:
ID:
Loc:
Floors:
Windows:
Other:

FIG.7

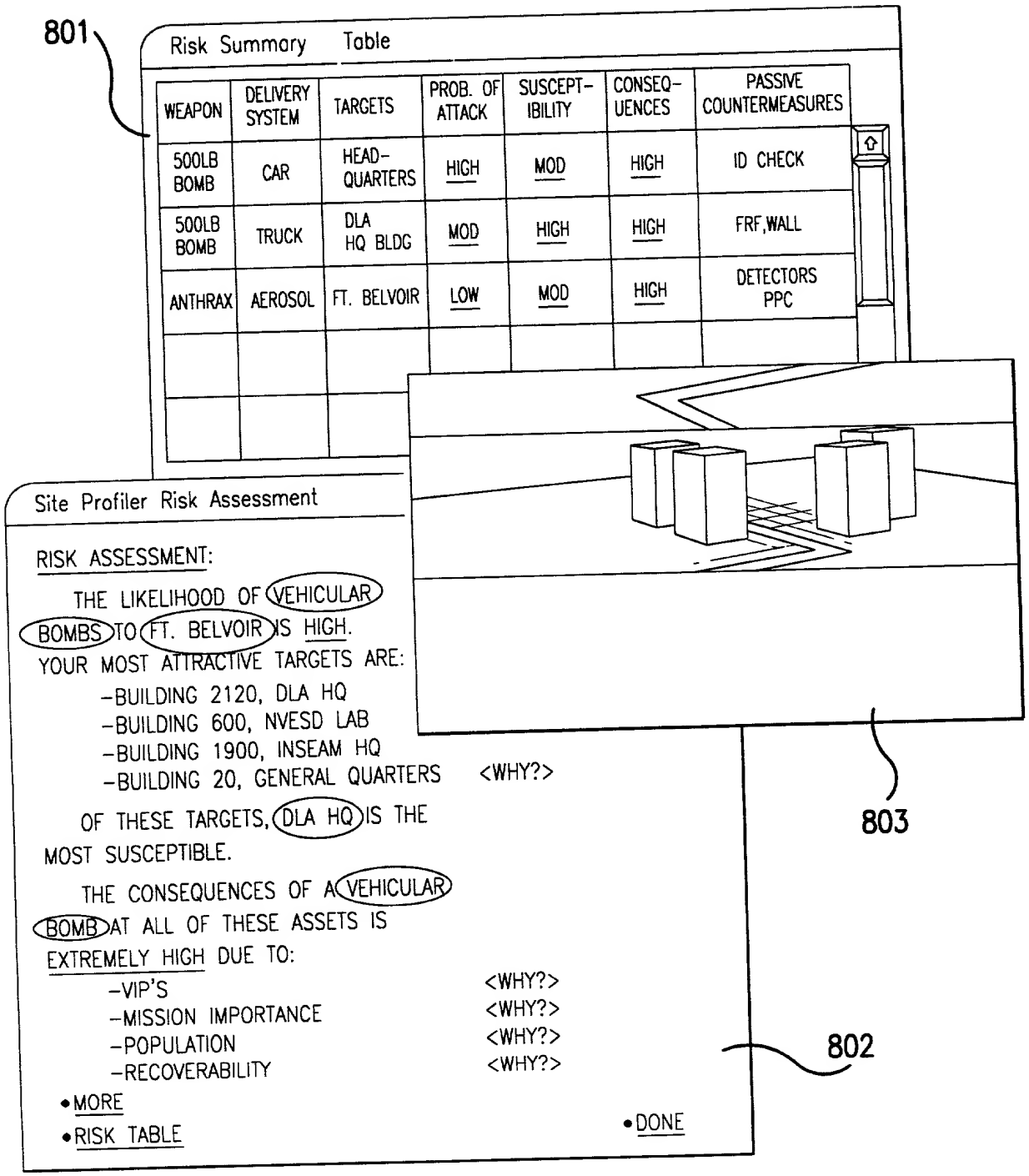

801
Risk Summary Table
WEAPON
DELIVERY SYSTEM
TARGETS
PROB. OF ATTACK
SUSCEPT-IBILITY
CONSEQ-UENCES
PASSIVE COUNTERMEASURES
500LB BOMB
CAR
HEAD-QUARTERS
HIGH
MOD
HIGH
ID CHECK
500LB BOMB
TRUCK
DLA HQ BLDG
MOD
HIGH
HIGH
FRF,WALL
ANTHRAX
AEROSOL
FT. BELVOIR
LOW
MOD
HIGH
DETECTORS PPC
Site Profiler Risk Assessment
RISK ASSESSMENT:
THE LIKELIHOOD OF VEHICULAR BOMBS TO FT. BELVOIR IS HIGH.
YOUR MOST ATTRACTIVE TARGETS ARE:
-BUILDING 2120, DLA HQ
-BUILDING 600, NVESD LAB
-BUILDING 1900, INSEAM HQ
-BUILDING 20, GENERAL QUARTERS <WHY?>
OF THESE TARGETS, DLA HQ IS THE MOST SUSCEPTIBLE.
THE CONSEQUENCES OF A VEHICULAR BOMB AT ALL OF THESE ASSETS IS EXTREMELY HIGH DUE TO:
-VIP'S <WHY?>
-MISSION IMPORTANCE <WHY?>
-POPULATION <WHY?>
-RECOVERABILITY <WHY?>
•MORE
•RISK TABLE
•DONE
803
802

FIG.8

TOKYO-OSAKA

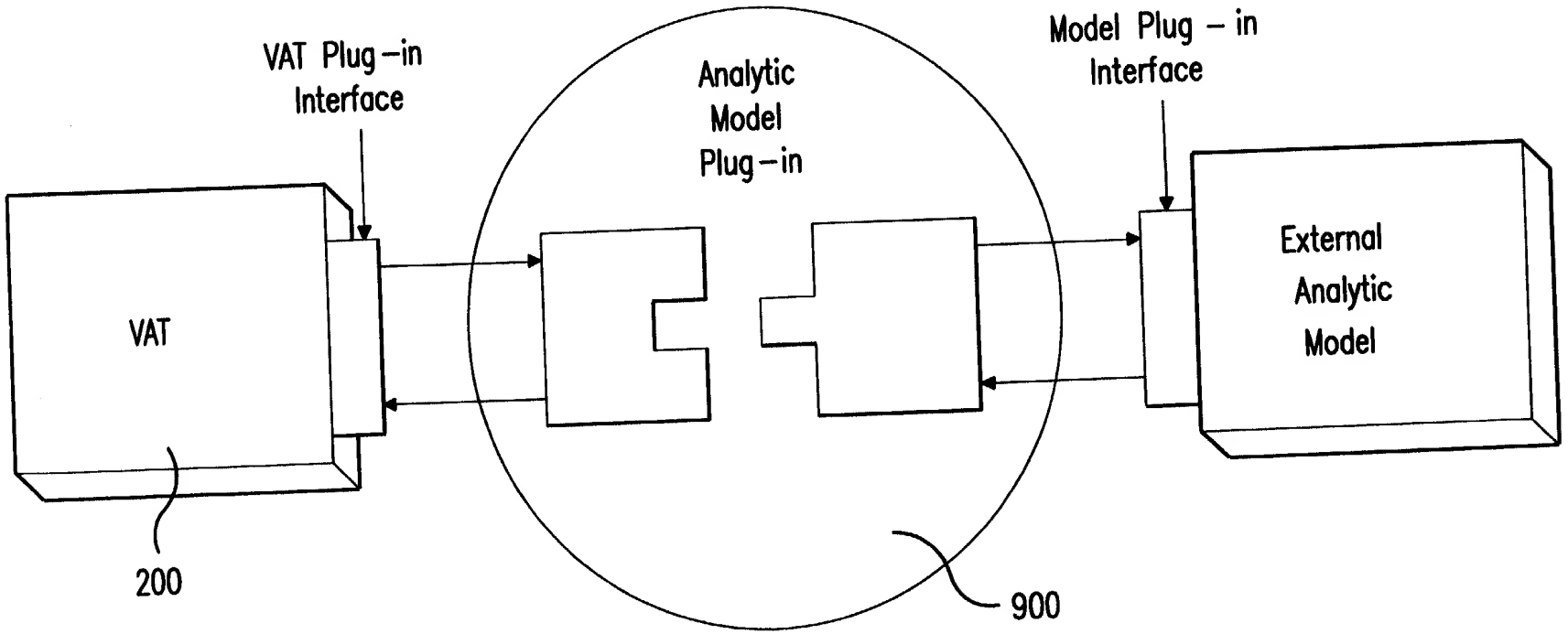


FIG.9

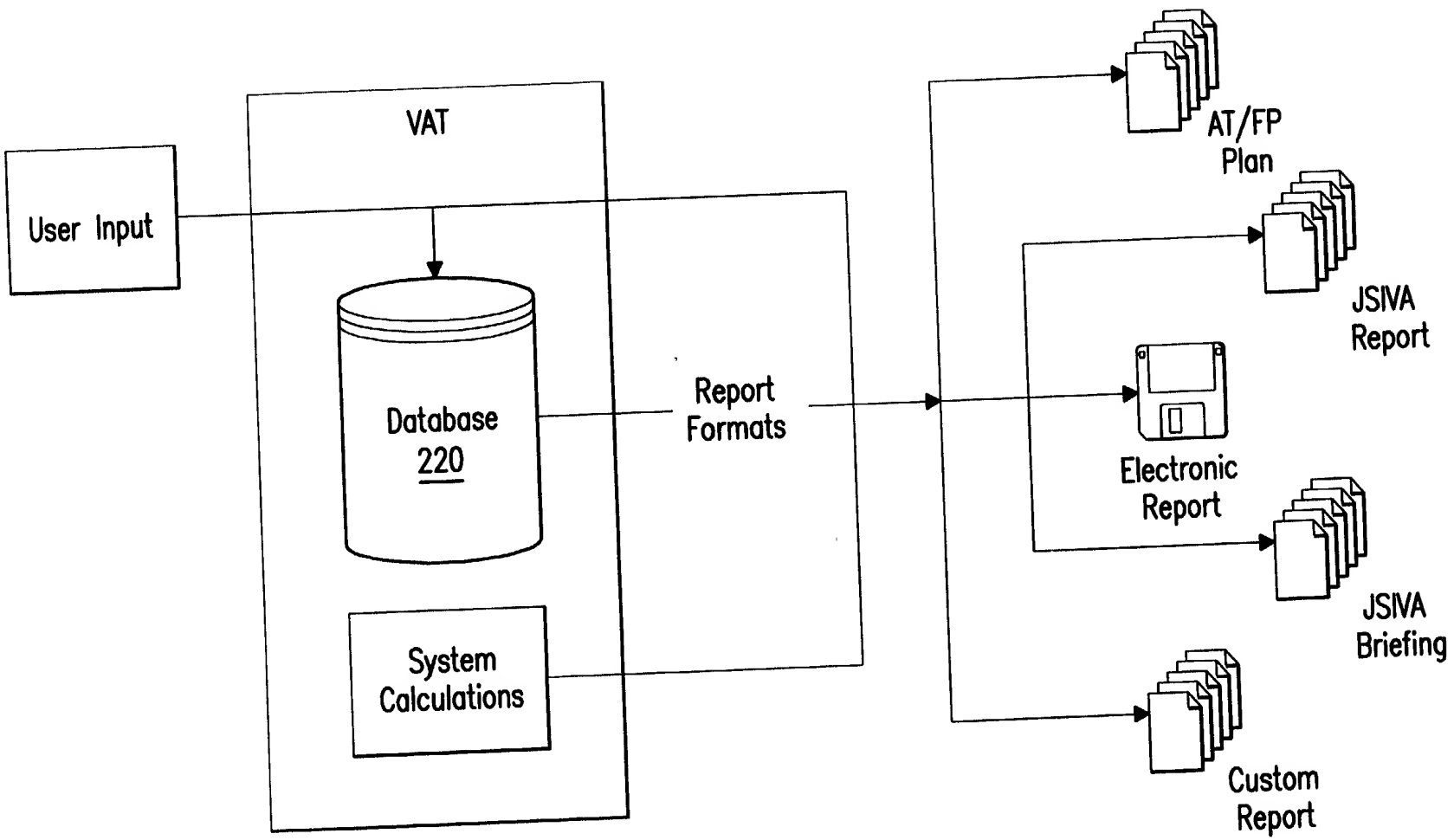

VAT
User Input
Database
220
System
Calculations
Report
Formats
AT/FP
Plan
JSIVA
Report
Electronic
Report
JSIVA
Briefing
Custom
Report

FIG.10

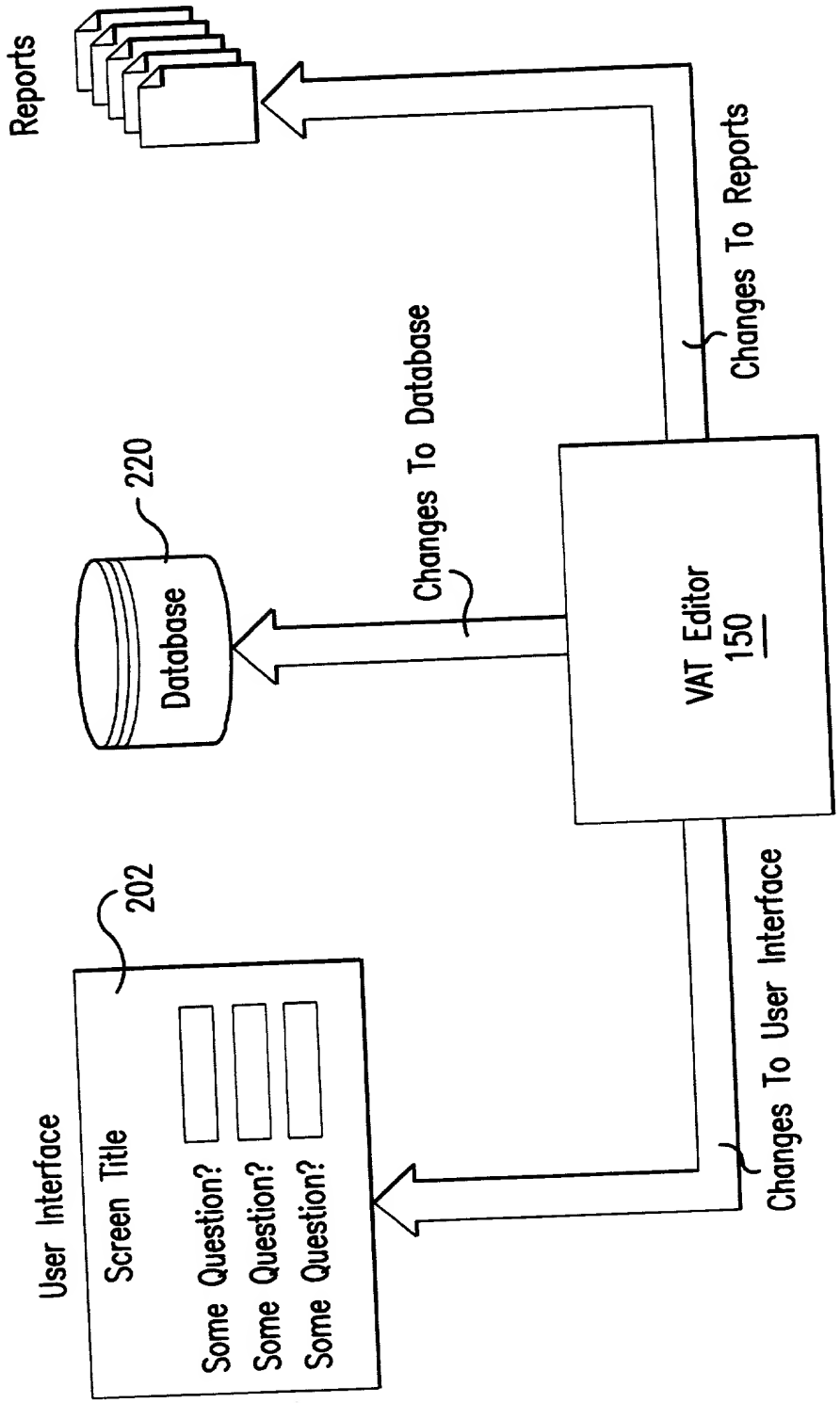

Reports
220
Database
Changes To Database
Changes To Reports
VAT Editor
150
202
User Interface
Screen Title
Some Question?
Some Question?
Some Question?
Changes To User Interface

FIG.11

PATENT PENDING

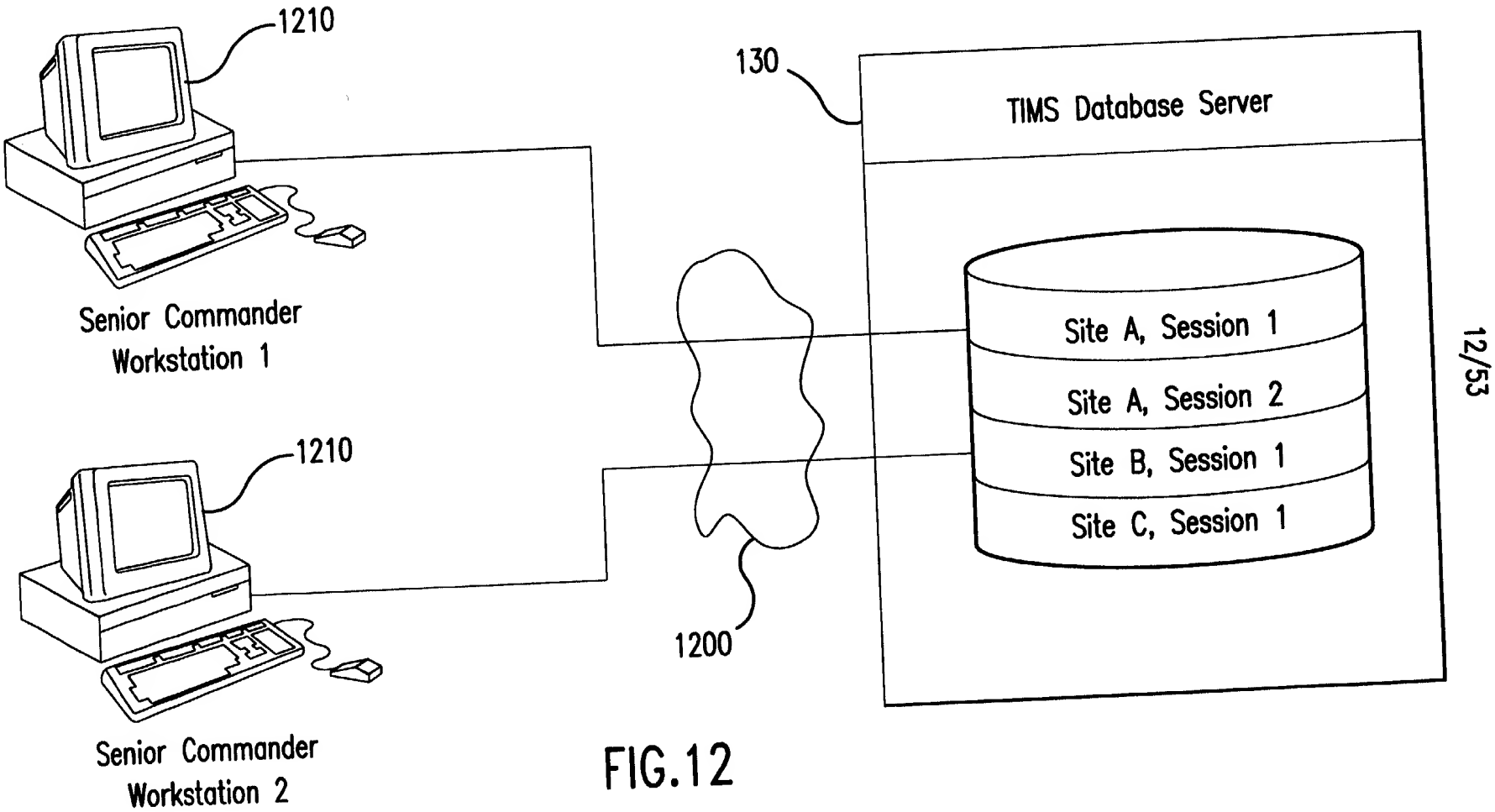


FIG.12

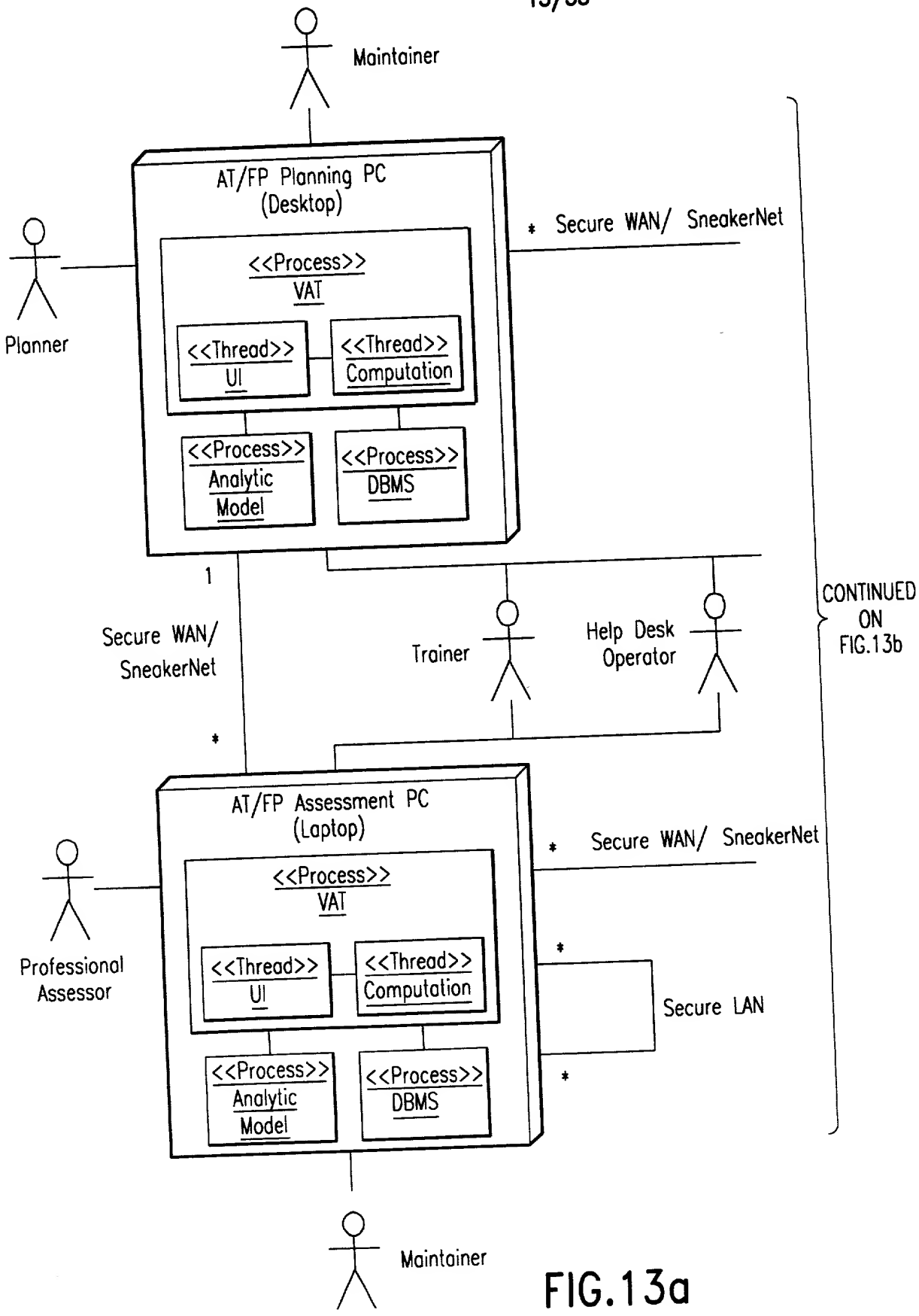

Maintainer
AT/FP Planning PC
(Desktop)
* Secure WAN/ SneakerNet
<<Process>>
VAT
<<Thread>>
UI
<<Thread>>
Computation
<<Process>>
Analytic
Model
<<Process>>
DBMS
Planner
1
Secure WAN/
SneakerNet
Trainer
Help Desk
Operator
CONTINUED
ON
FIG.13b
*
AT/FP Assessment PC
(Laptop)
* Secure WAN/ SneakerNet
<<Process>>
VAT
<<Thread>>
UI
<<Thread>>
Computation
*
Secure LAN
*
<<Process>>
Analytic
Model
<<Process>>
DBMS
Professional
Assessor
Maintainer

FIG.13a

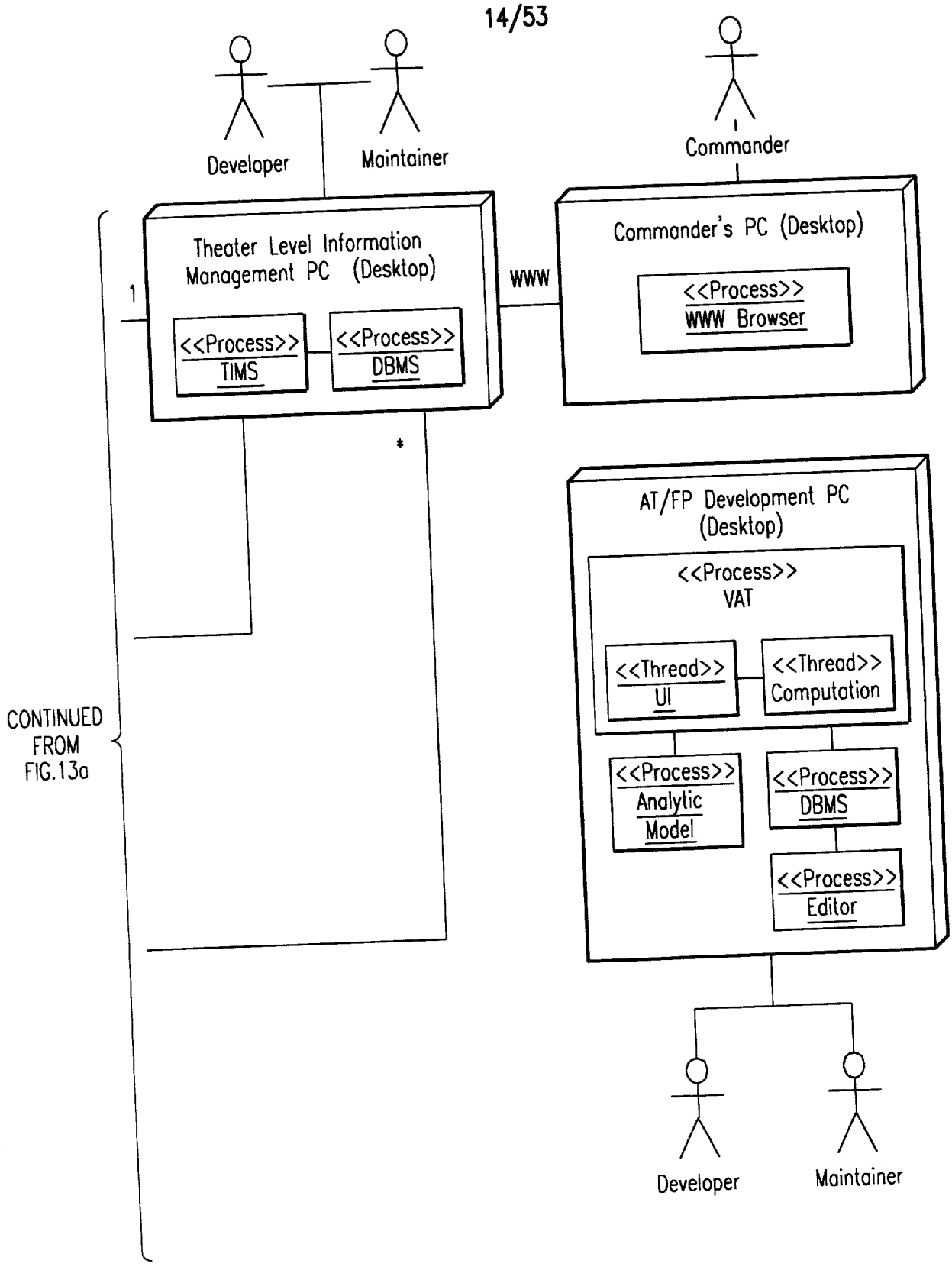

Developer
Maintainer
Commander
Theater Level Information Management PC (Desktop)
<<Process>> TIMS
<<Process>> DBMS
WWW
Commander's PC (Desktop)
<<Process>> WWW Browser
1
*
AT/FP Development PC (Desktop)
<<Process>> VAT
<<Thread>> UI
<<Thread>> Computation
<<Process>> Analytic Model
<<Process>> DBMS
<<Process>> Editor
CONTINUED FROM FIG.13a
Developer
Maintainer

FIG.13b

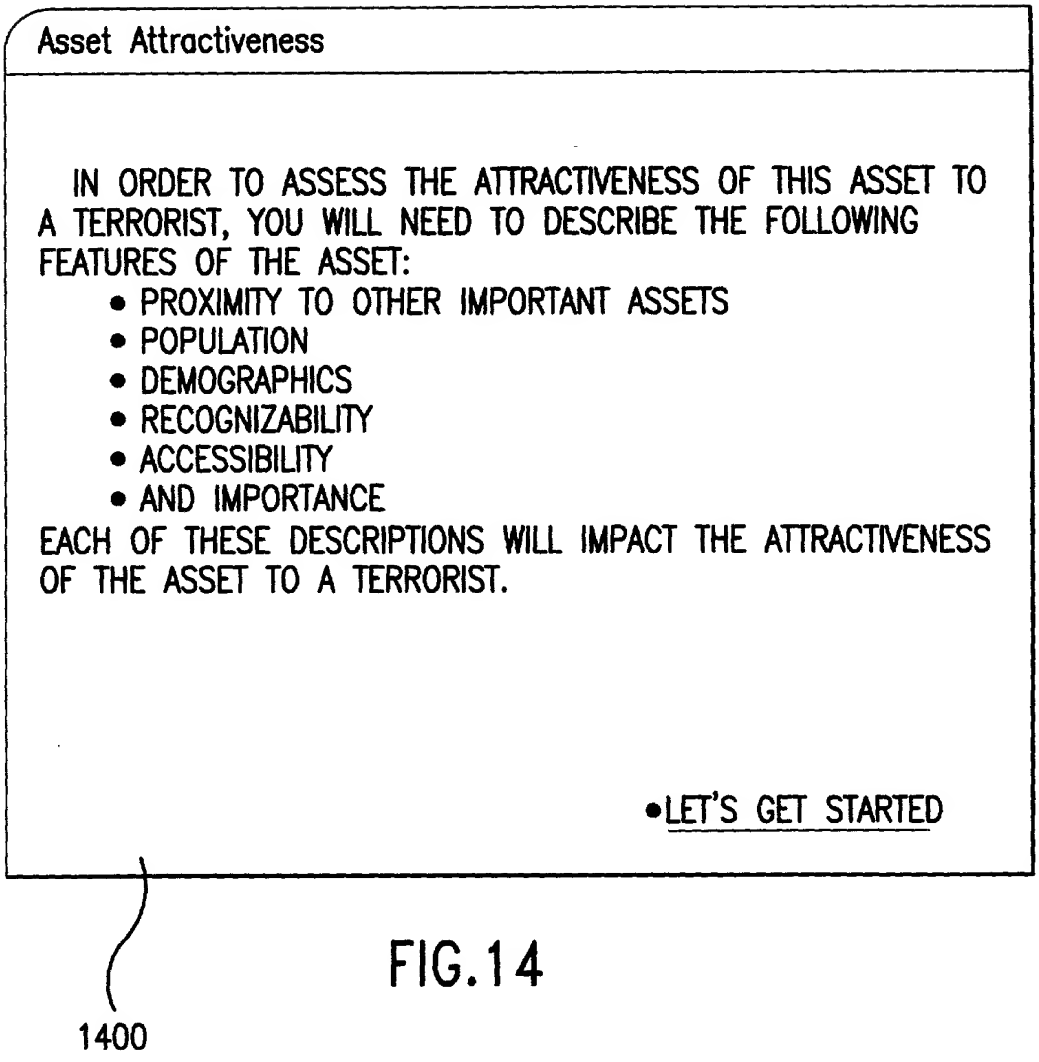

Asset Attractiveness
IN ORDER TO ASSESS THE ATTRACTIVENESS OF THIS ASSET TO A TERRORIST, YOU WILL NEED TO DESCRIBE THE FOLLOWING FEATURES OF THE ASSET:
• PROXIMITY TO OTHER IMPORTANT ASSETS
• POPULATION
• DEMOGRAPHICS
• RECOGNIZABILITY
• ACCESSIBILITY
• AND IMPORTANCE
EACH OF THESE DESCRIPTIONS WILL IMPACT THE ATTRACTIVENESS OF THE ASSET TO A TERRORIST.
•LET'S GET STARTED
1400

FIG.14

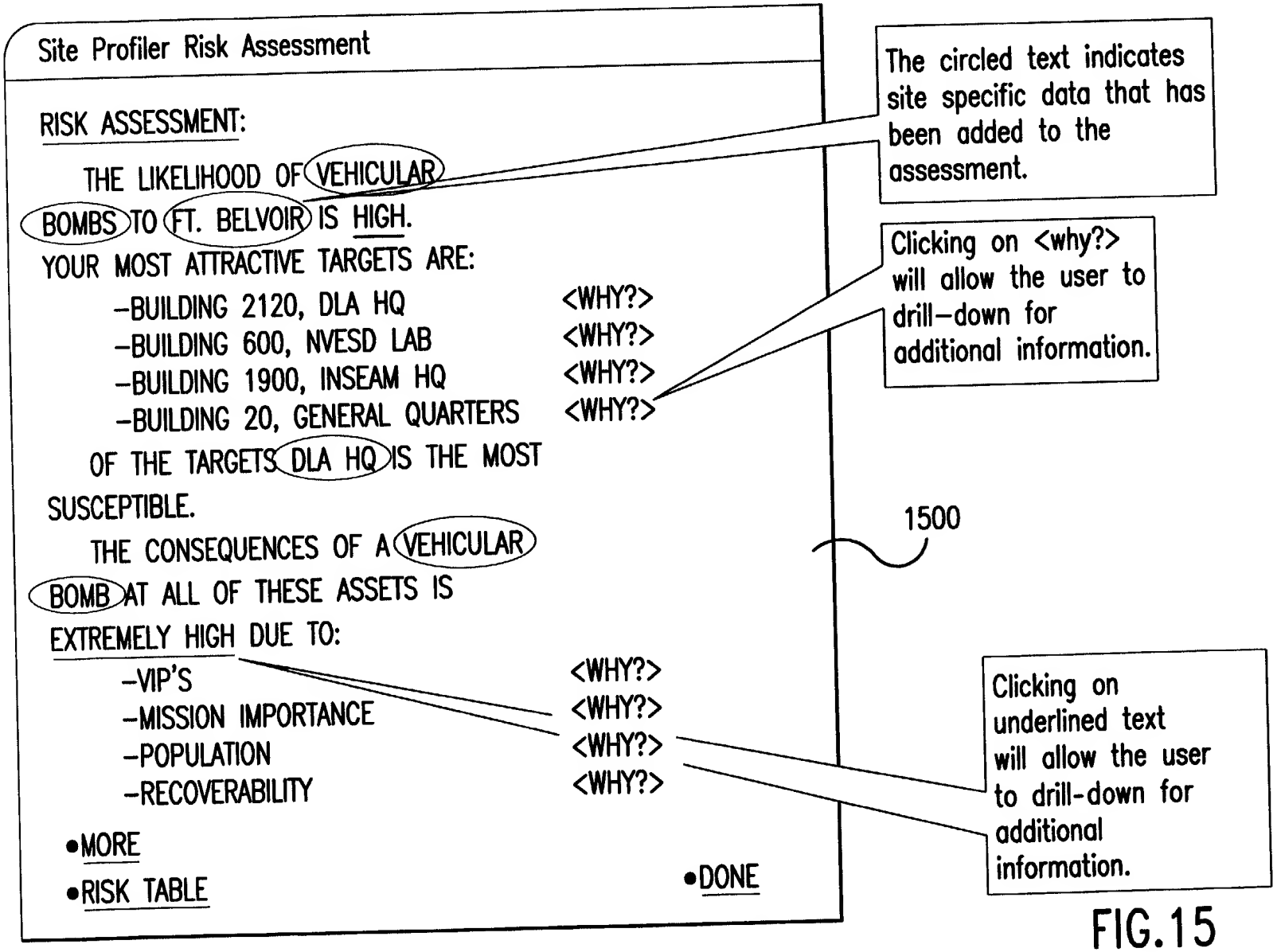

Site Profiler Risk Assessment
RISK ASSESSMENT:
THE LIKELIHOOD OF VEHICULAR BOMBS TO FT. BELVOIR IS HIGH.
YOUR MOST ATTRACTIVE TARGETS ARE:
-BUILDING 2120, DLA HQ <WHY?>
-BUILDING 600, NVESD LAB <WHY?>
-BUILDING 1900, INSEAM HQ <WHY?>
-BUILDING 20, GENERAL QUARTERS <WHY?>
OF THE TARGETS DLA HQ IS THE MOST SUSCEPTIBLE.
THE CONSEQUENCES OF A VEHICULAR BOMB AT ALL OF THESE ASSETS IS EXTREMELY HIGH DUE TO:
-VIP'S <WHY?>
-MISSION IMPORTANCE <WHY?>
-POPULATION <WHY?>
-RECOVERABILITY <WHY?>
•MORE
•RISK TABLE
•DONE
1500
The circled text indicates site specific data that has been added to the assessment.
Clicking on <why?> will allow the user to drill-down for additional information.
Clicking on underlined text will allow the user to drill-down for additional information.

FIG.15

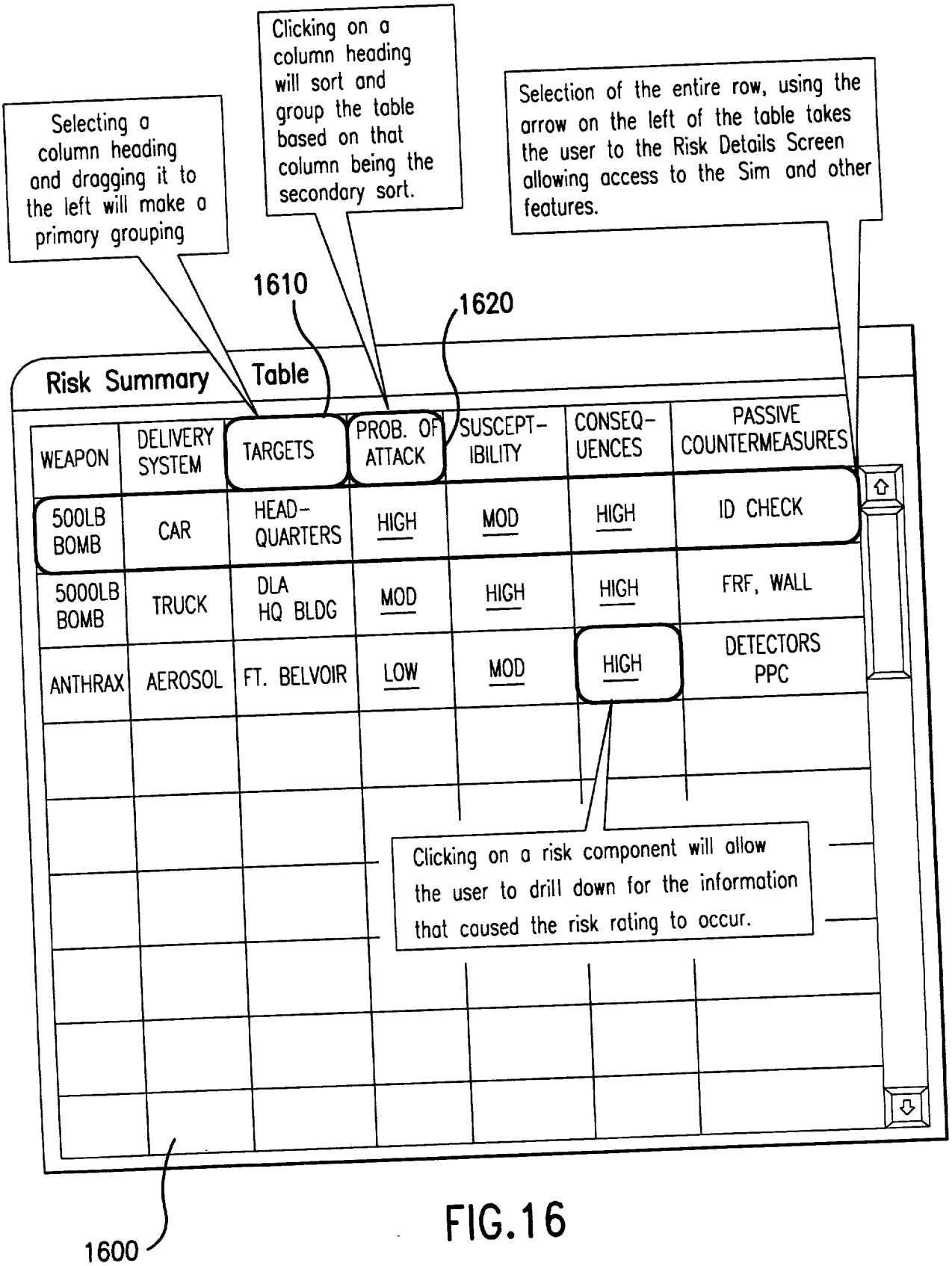

Selecting a column heading and dragging it to the left will make a primary grouping
Clicking on a column heading will sort and group the table based on that column being the secondary sort.
Selection of the entire row, using the arrow on the left of the table takes the user to the Risk Details Screen allowing access to the Sim and other features.
1610
1620
Risk Summary Table
WEAPON
DELIVERY SYSTEM
TARGETS
PROB. OF ATTACK
SUSCEPT-IBILITY
CONSEQ-UENCES
PASSIVE COUNTERMEASURES
500LB BOMB
CAR
HEAD-QUARTERS
HIGH
MOD
HIGH
ID CHECK
5000LB BOMB
TRUCK
DLA HQ BLDG
MOD
HIGH
HIGH
FRF, WALL
ANTHRAX
AEROSOL
FT. BELVOIR
LOW
MOD
HIGH
DETECTORS PPC
Clicking on a risk component will allow the user to drill down for the information that caused the risk rating to occur.
1600

FIG.16

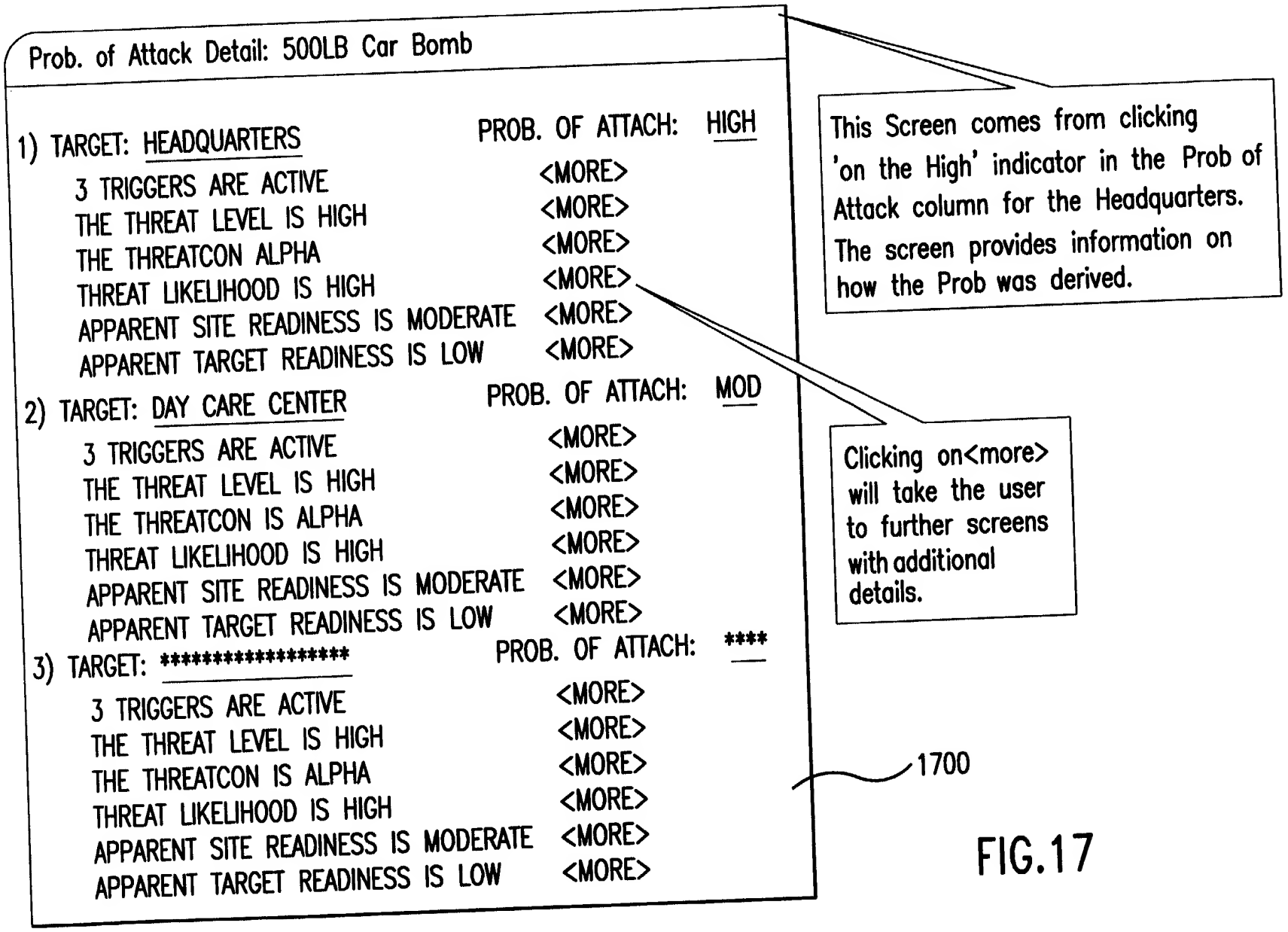

Prob. of Attack Detail: 500LB Car Bomb
1) TARGET: HEADQUARTERS
PROB. OF ATTACH: HIGH
3 TRIGGERS ARE ACTIVE <MORE>
THE THREAT LEVEL IS HIGH <MORE>
THE THREATCON ALPHA <MORE>
THREAT LIKELIHOOD IS HIGH <MORE>
APPARENT SITE READINESS IS MODERATE <MORE>
APPARENT TARGET READINESS IS LOW <MORE>
2) TARGET: DAY CARE CENTER
PROB. OF ATTACH: MOD
3 TRIGGERS ARE ACTIVE <MORE>
THE THREAT LEVEL IS HIGH <MORE>
THE THREATCON IS ALPHA <MORE>
THREAT LIKELIHOOD IS HIGH <MORE>
APPARENT SITE READINESS IS MODERATE <MORE>
APPARENT TARGET READINESS IS LOW <MORE>
3) TARGET: **********
PROB. OF ATTACH: ****
3 TRIGGERS ARE ACTIVE <MORE>
THE THREAT LEVEL IS HIGH <MORE>
THE THREATCON IS ALPHA <MORE>
THREAT LIKELIHOOD IS HIGH <MORE>
APPARENT SITE READINESS IS MODERATE <MORE>
APPARENT TARGET READINESS IS LOW <MORE>
This Screen comes from clicking 'on the High' indicator in the Prob of Attack column for the Headquarters. The screen provides information on how the Prob was derived.
Clicking on<more> will take the user to further screens with additional details.
1700

FIG.17

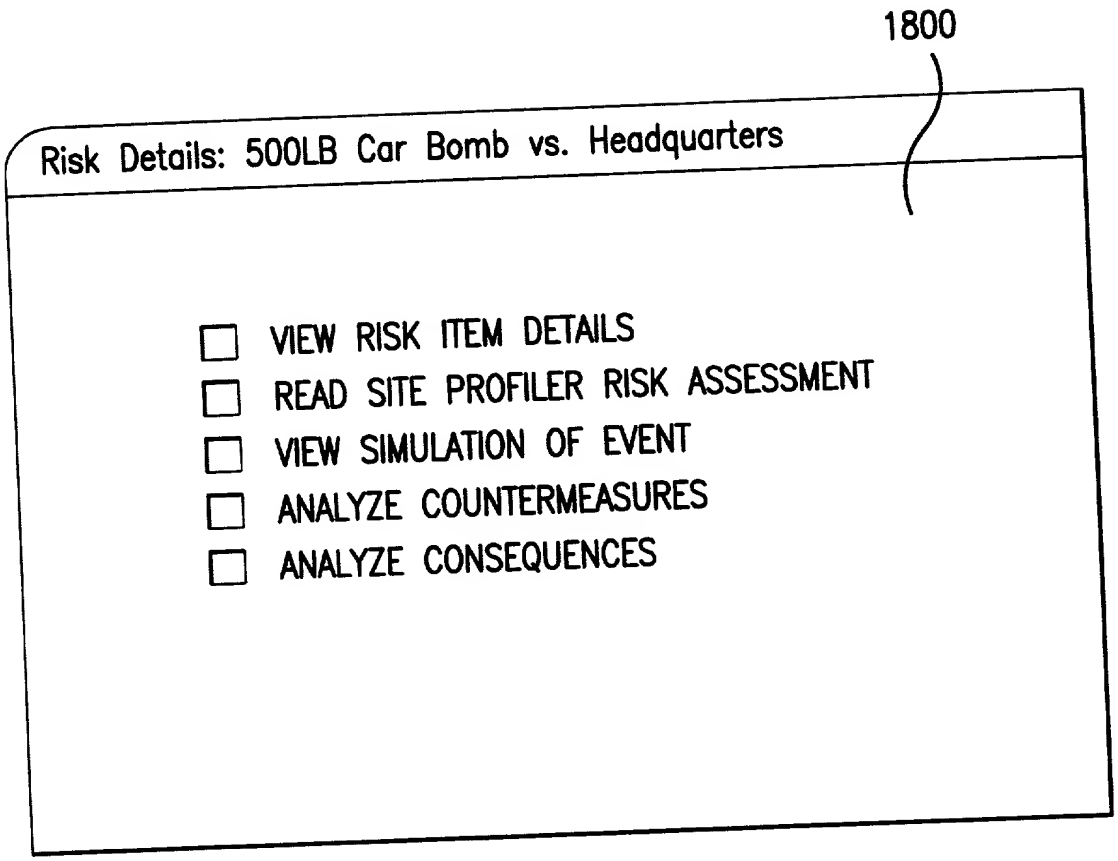

1800
Risk Details: 500LB Car Bomb vs. Headquarters
VIEW RISK ITEM DETAILS
READ SITE PROFILER RISK ASSESSMENT
VIEW SIMULATION OF EVENT
ANALYZE COUNTERMEASURES
ANALYZE CONSEQUENCES

FIG.18

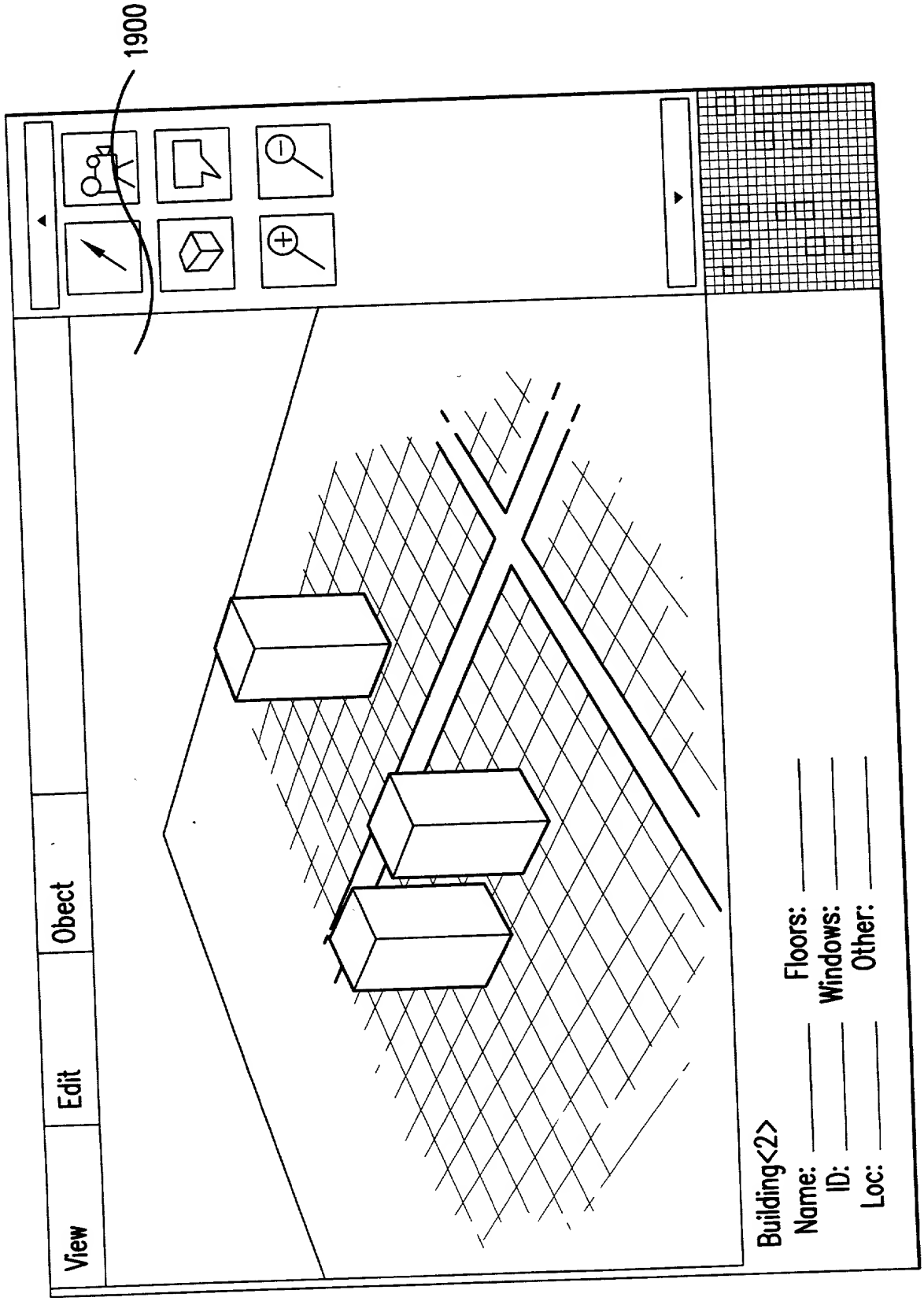

1900
View
Edit
Obect
Building<2>
Name:
ID:
Loc:
Floors:
Windows:
Other:

FIG.19

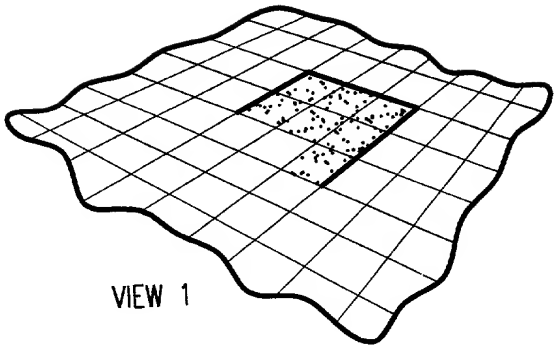


FIG.20a

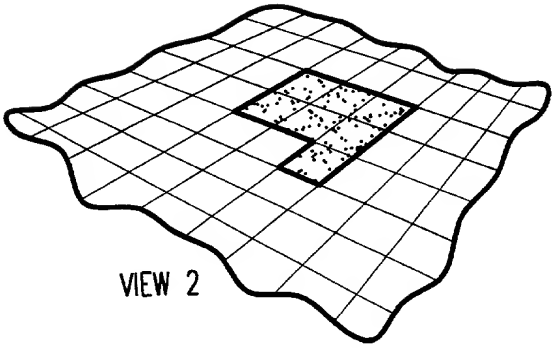


FIG.20b

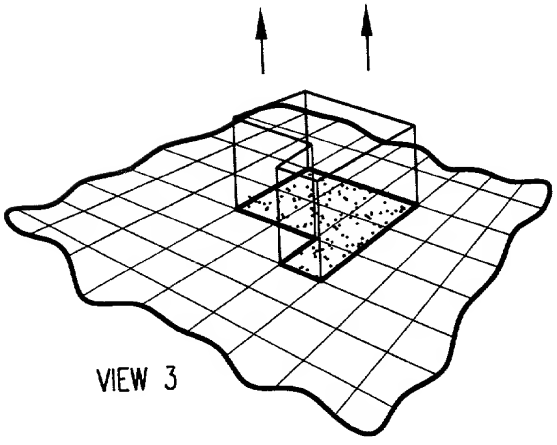


FIG.20c

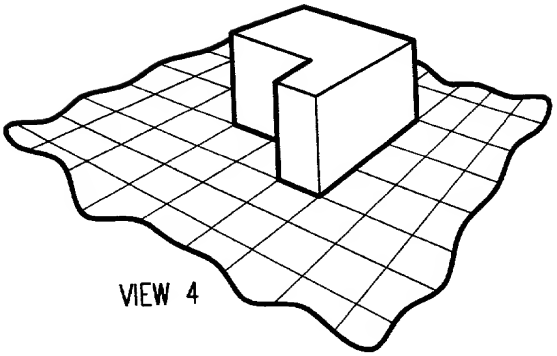


FIG.20d

Template Redacted

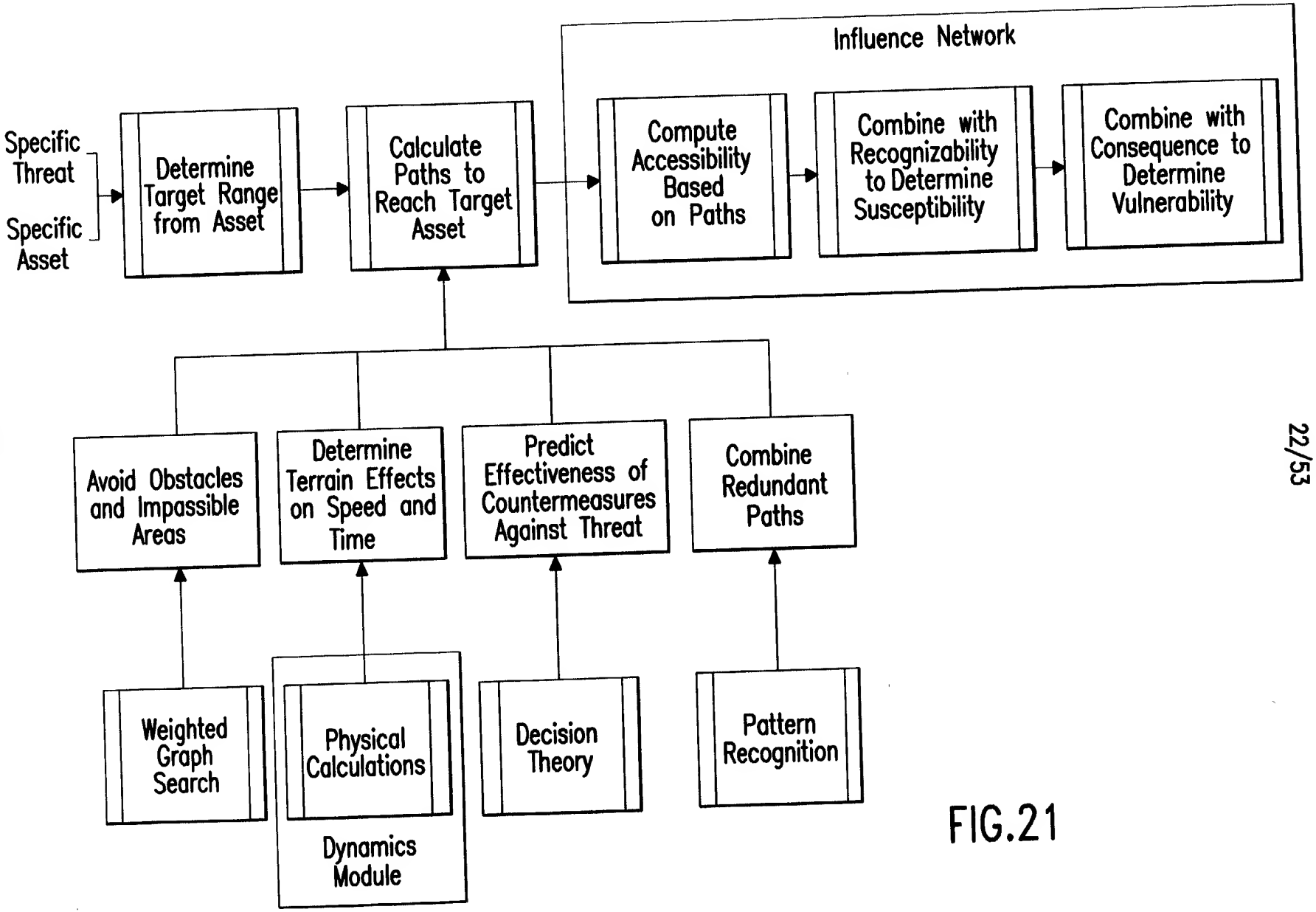


FIG.21

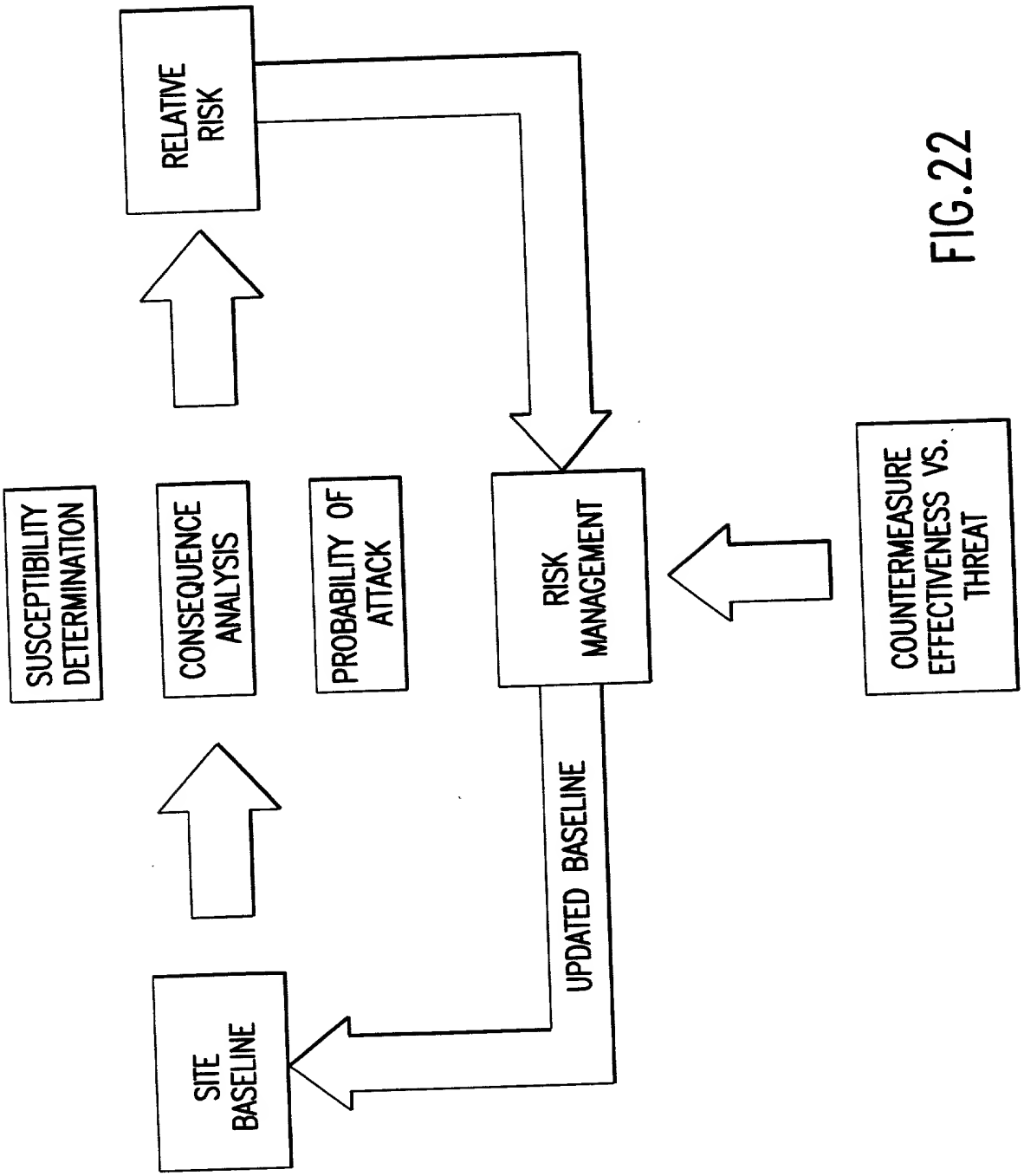

RELATIVE RISK
SUSCEPTIBILITY DETERMINATION
CONSEQUENCE ANALYSIS
PROBABILITY OF ATTACK
RISK MANAGEMENT
COUNTERMEASURE EFFECTIVENESS VS. THREAT
SITE BASELINE
UPDATED BASELINE

FIG.22

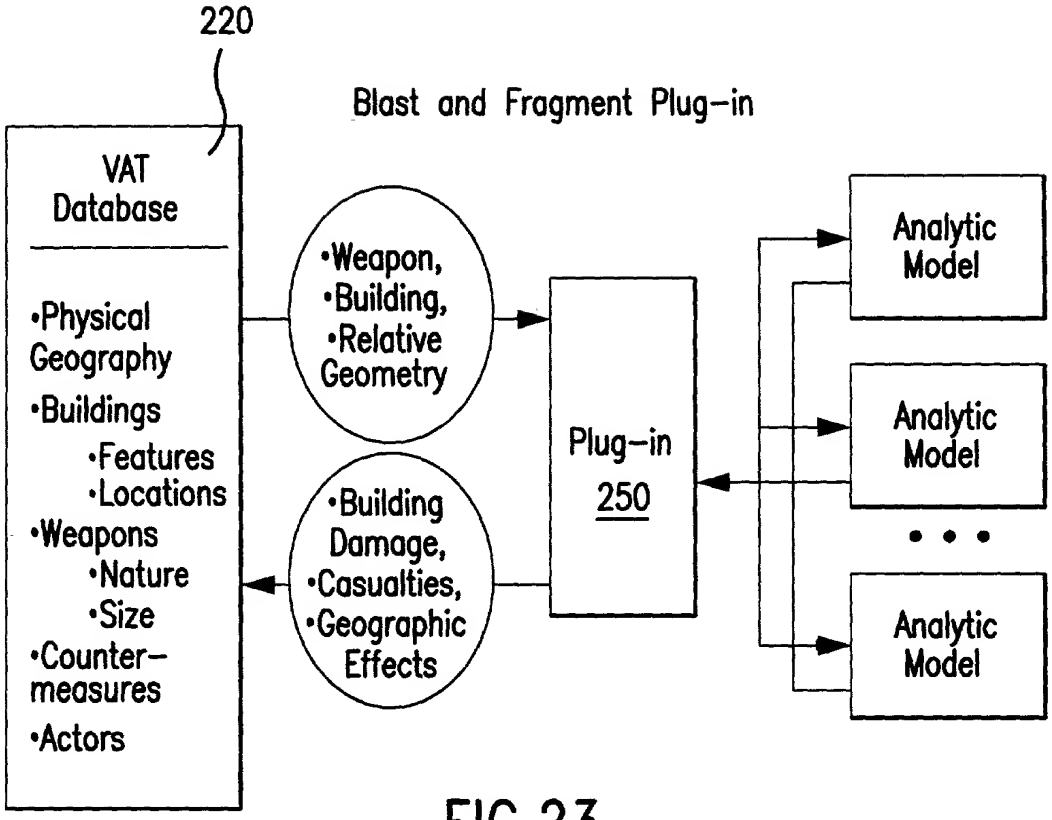

220
Blast and Fragment Plug-in
VAT Database
•Physical Geography
•Buildings
•Features
•Locations
•Weapons
•Nature
•Size
•Counter-measures
•Actors
•Weapon,
•Building,
•Relative Geometry
•Building Damage,
•Casualties,
•Geographic Effects
Plug-in 250
Analytic Model
Analytic Model
Analytic Model

FIG.23

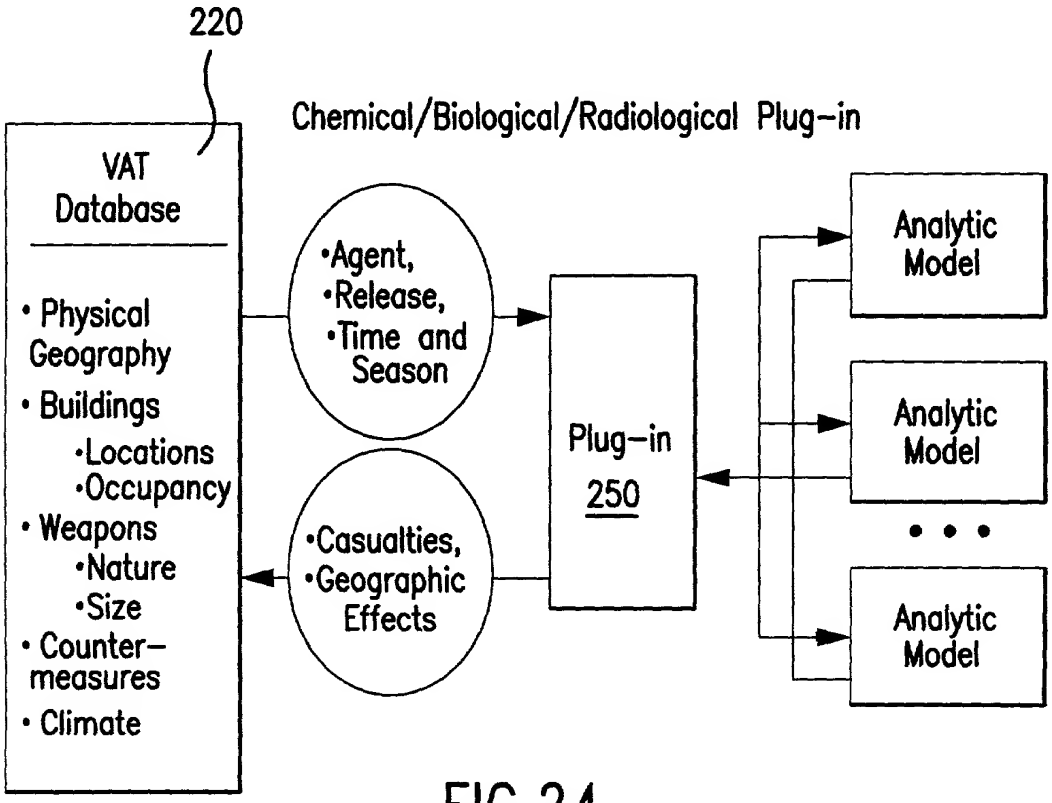

220
Chemical/Biological/Radiological Plug-in
VAT Database
• Physical Geography
• Buildings
•Locations
•Occupancy
• Weapons
•Nature
•Size
• Counter-measures
• Climate
•Agent,
•Release,
•Time and Season
•Casualties,
•Geographic Effects
Plug-in 250
Analytic Model
Analytic Model
Analytic Model

FIG.24

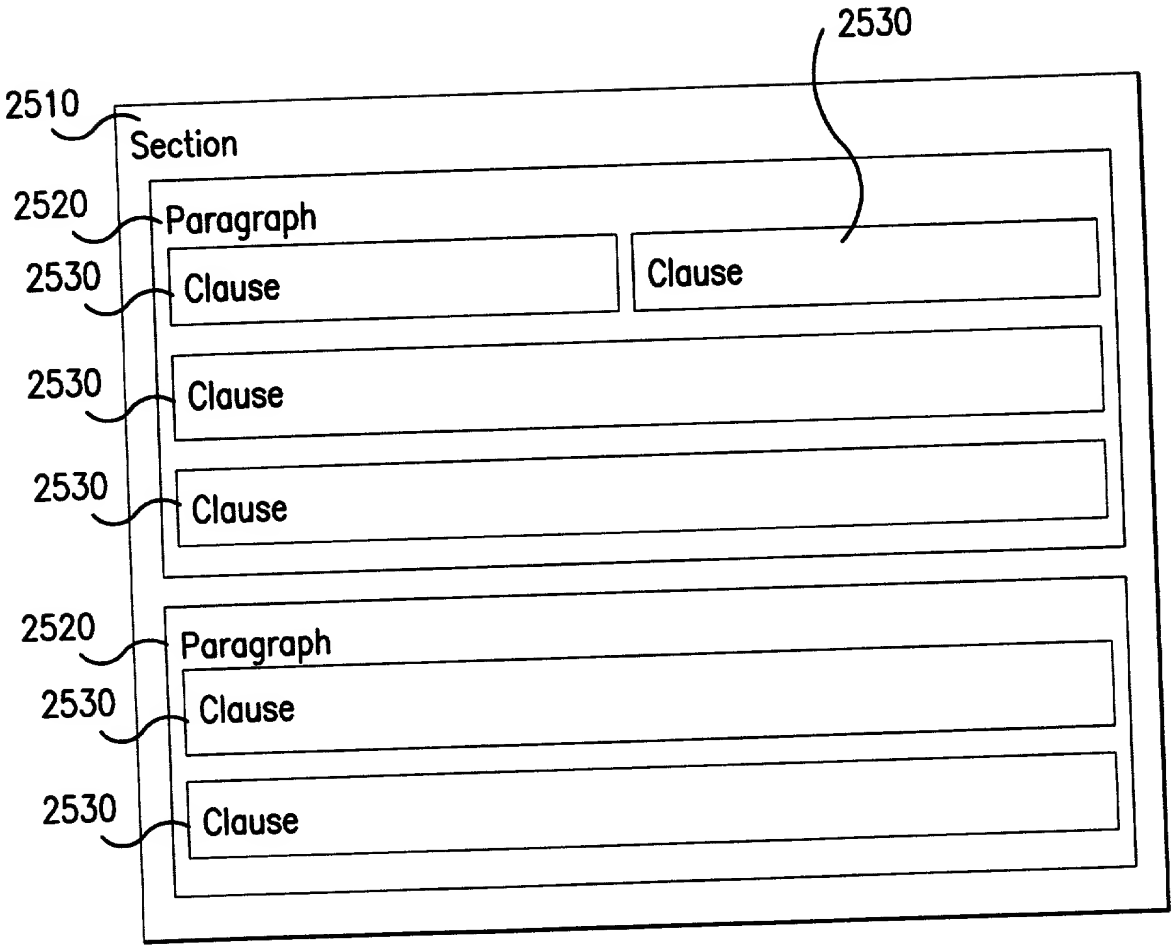

2530
2510
Section
2520
Paragraph
2530
Clause
Clause
2530
Clause
2530
Clause
2520
Paragraph
2530
Clause
2530
Clause

FIG.25

Protected Document

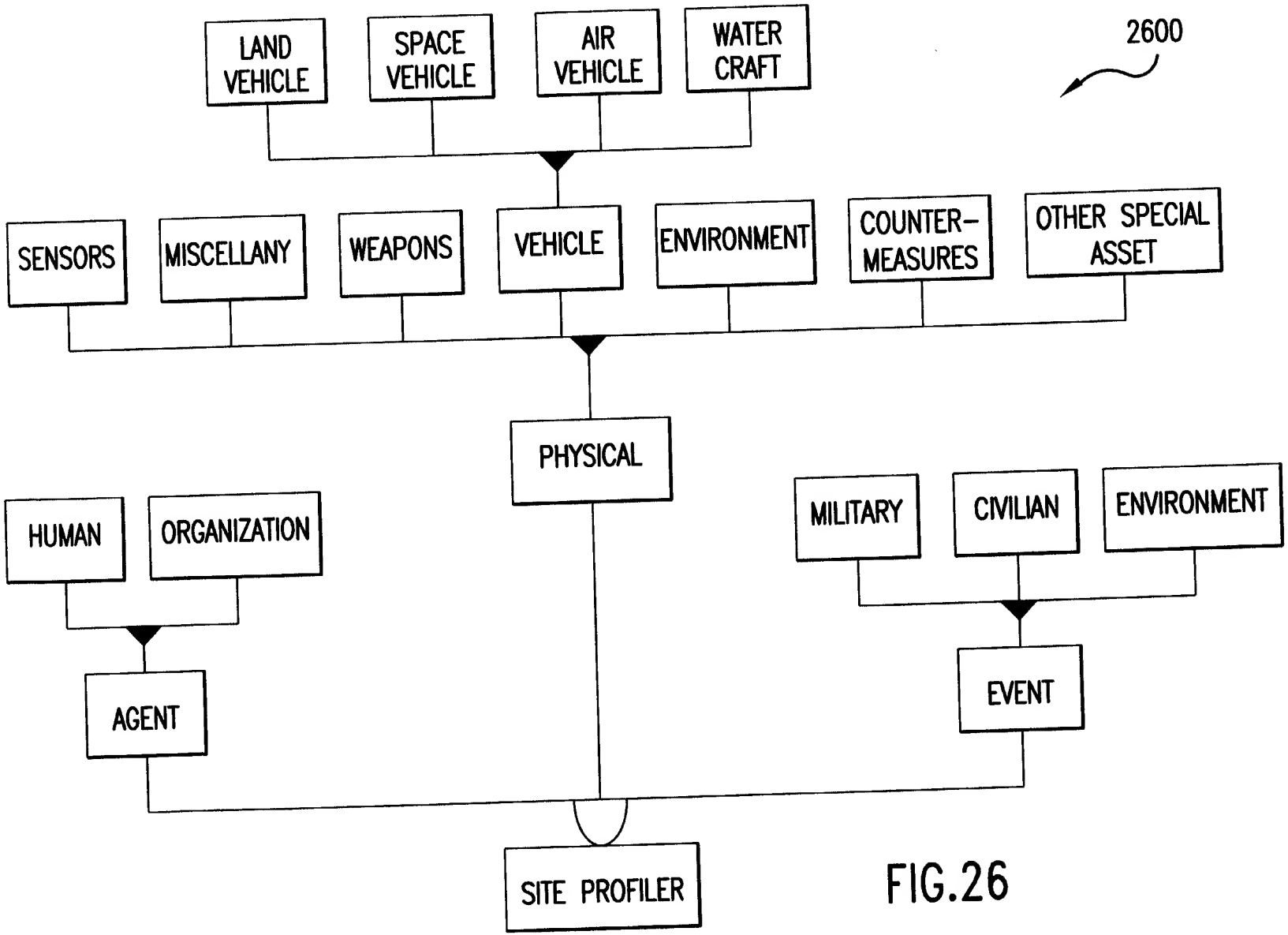


FIG.26

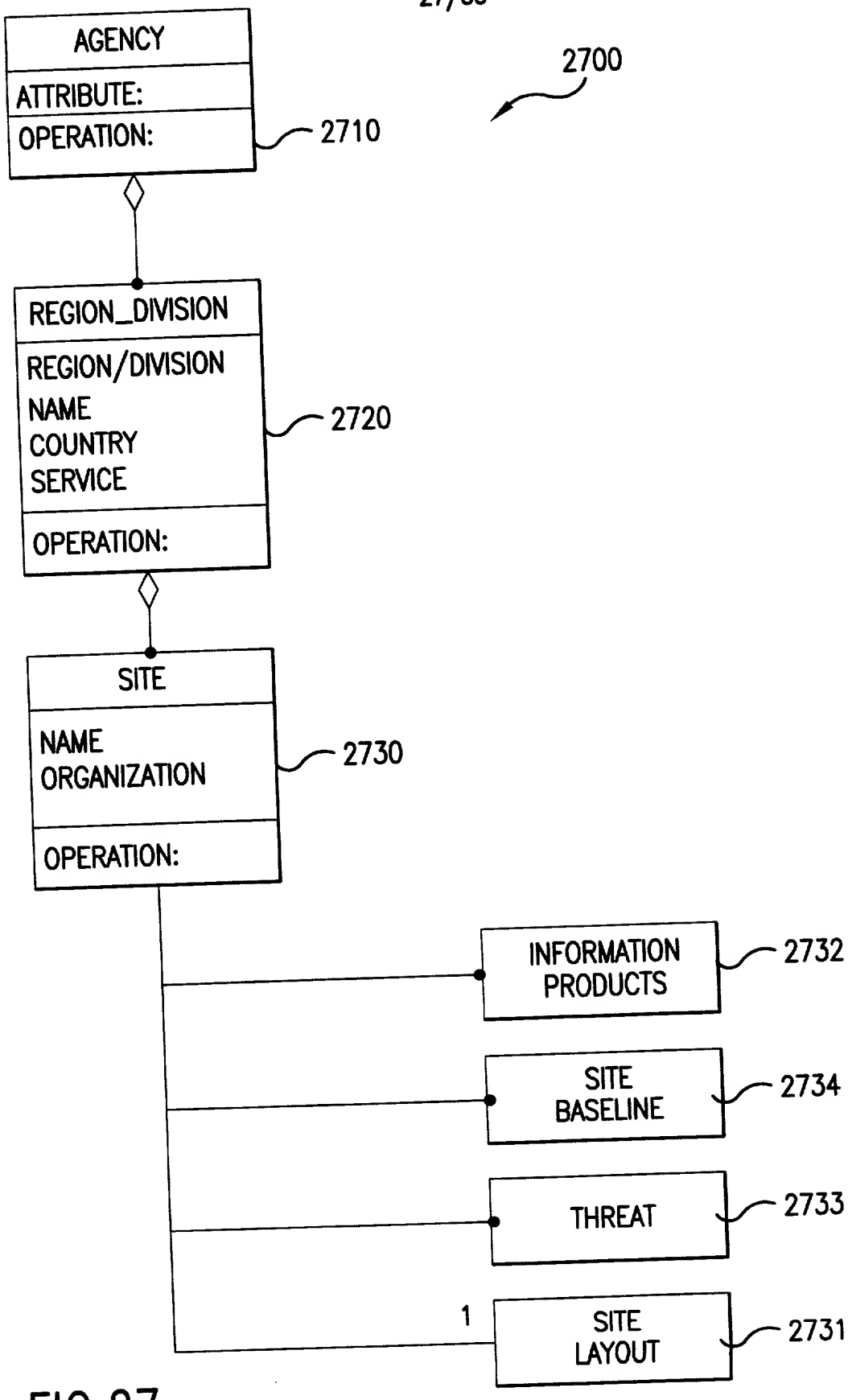

AGENCY
ATTRIBUTE:
OPERATION:
2710
2700
REGION_DIVISION
REGION/DIVISION
NAME
COUNTRY
SERVICE
OPERATION:
2720
SITE
NAME
ORGANIZATION
OPERATION:
2730
INFORMATION PRODUCTS
2732
SITE BASELINE
2734
THREAT
2733
1
SITE LAYOUT
2731

FIG.27

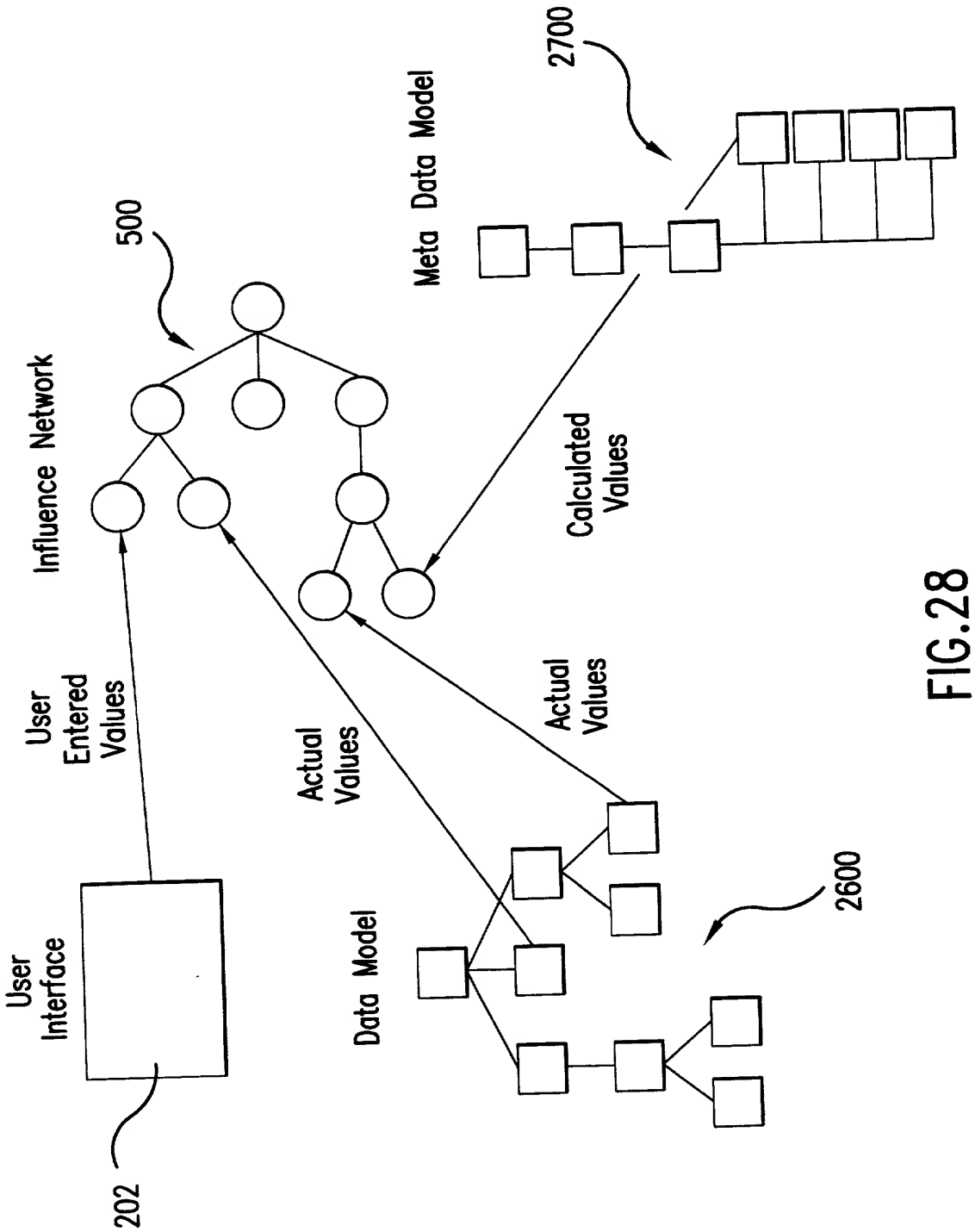

User Interface
202
User Entered Values
Influence Network
500
Actual Values
Actual Values
Data Model
2600
Calculated Values
Meta Data Model
2700

FIG.28

PATENT DOCUMENT

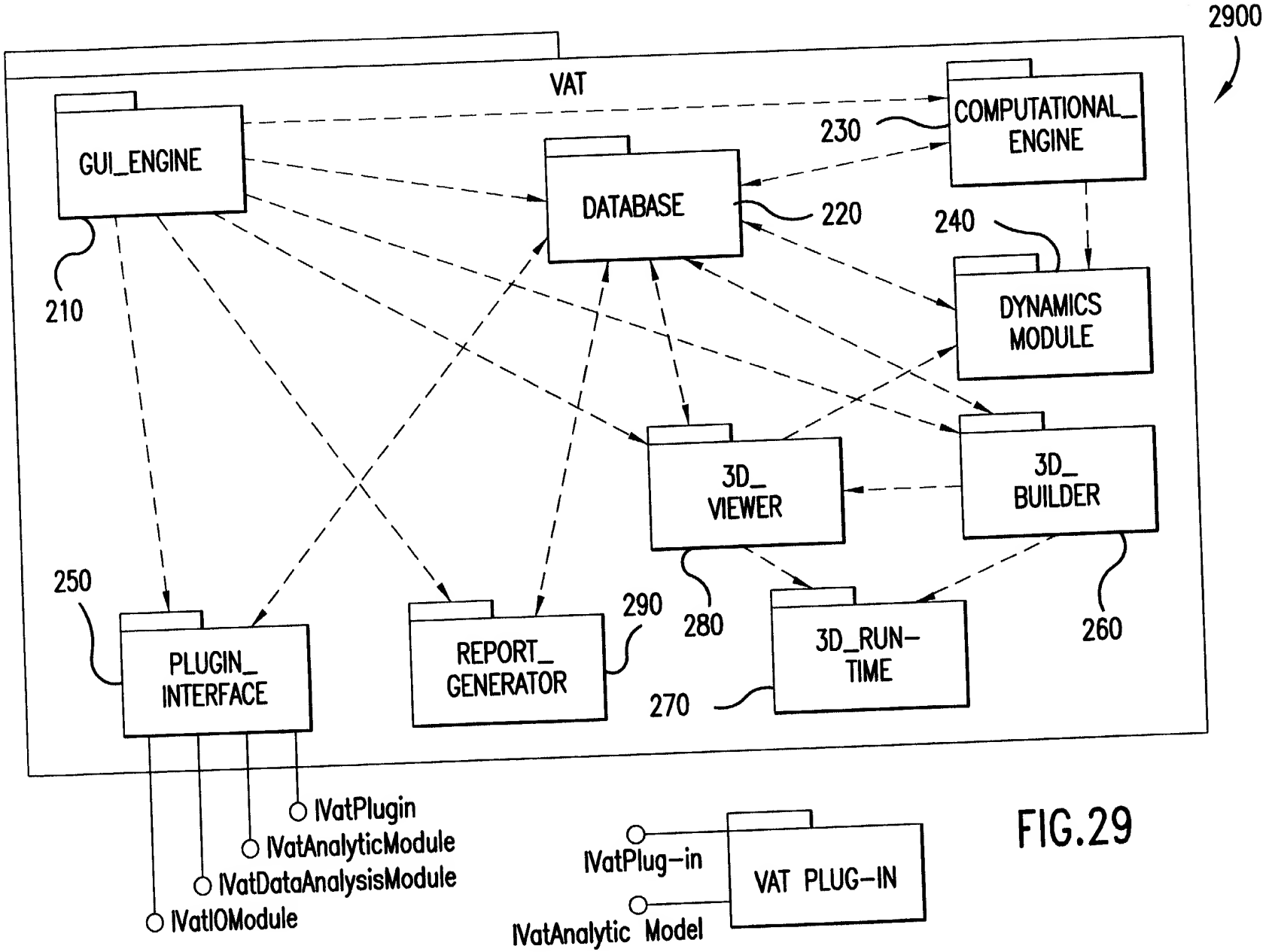


FIG.29

SUBSTITUTE SHEET (RULE 26)

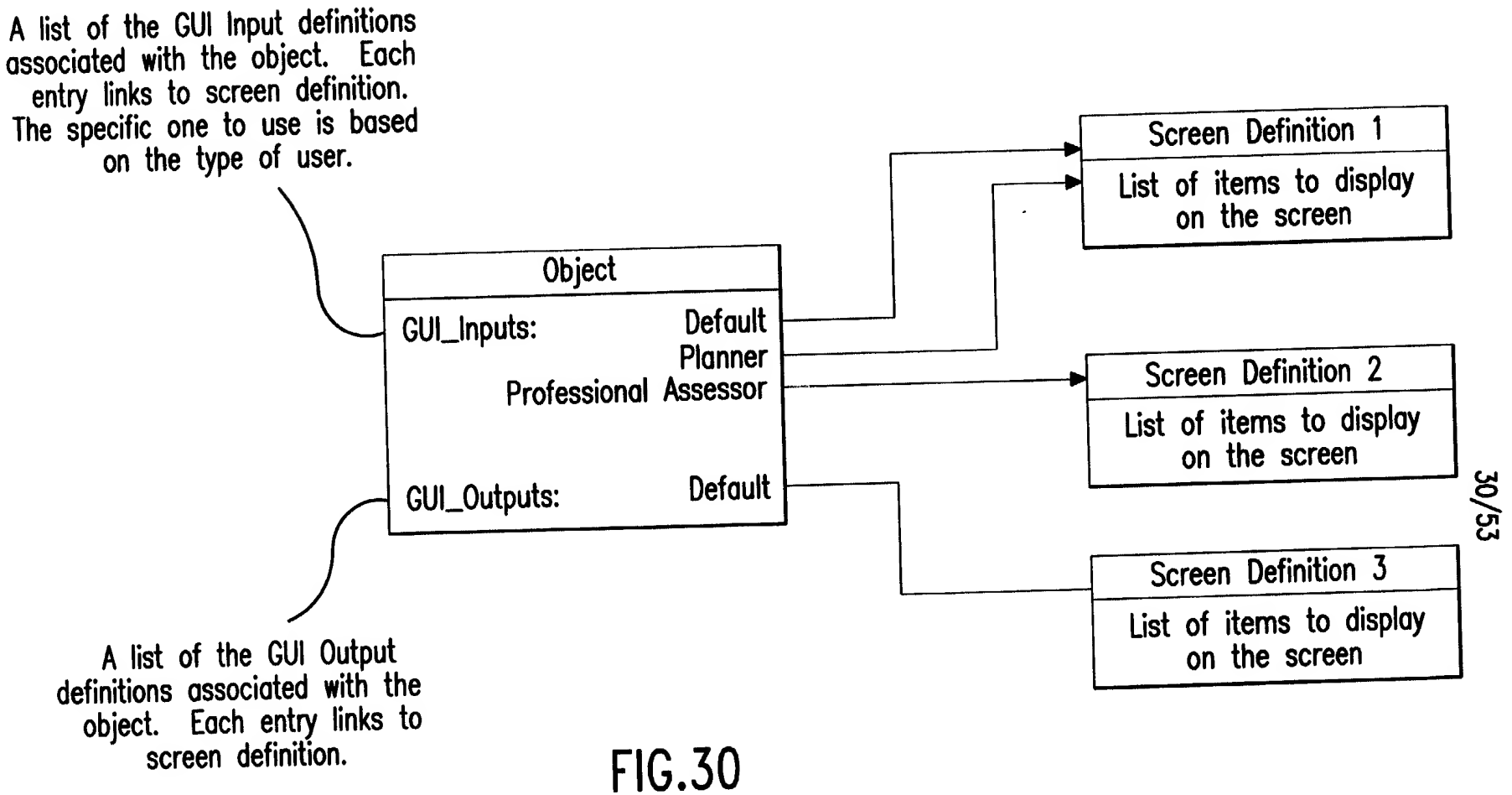


FIG.30

[illegible]

Screen Definition consist of a list of items to display to the user

3100

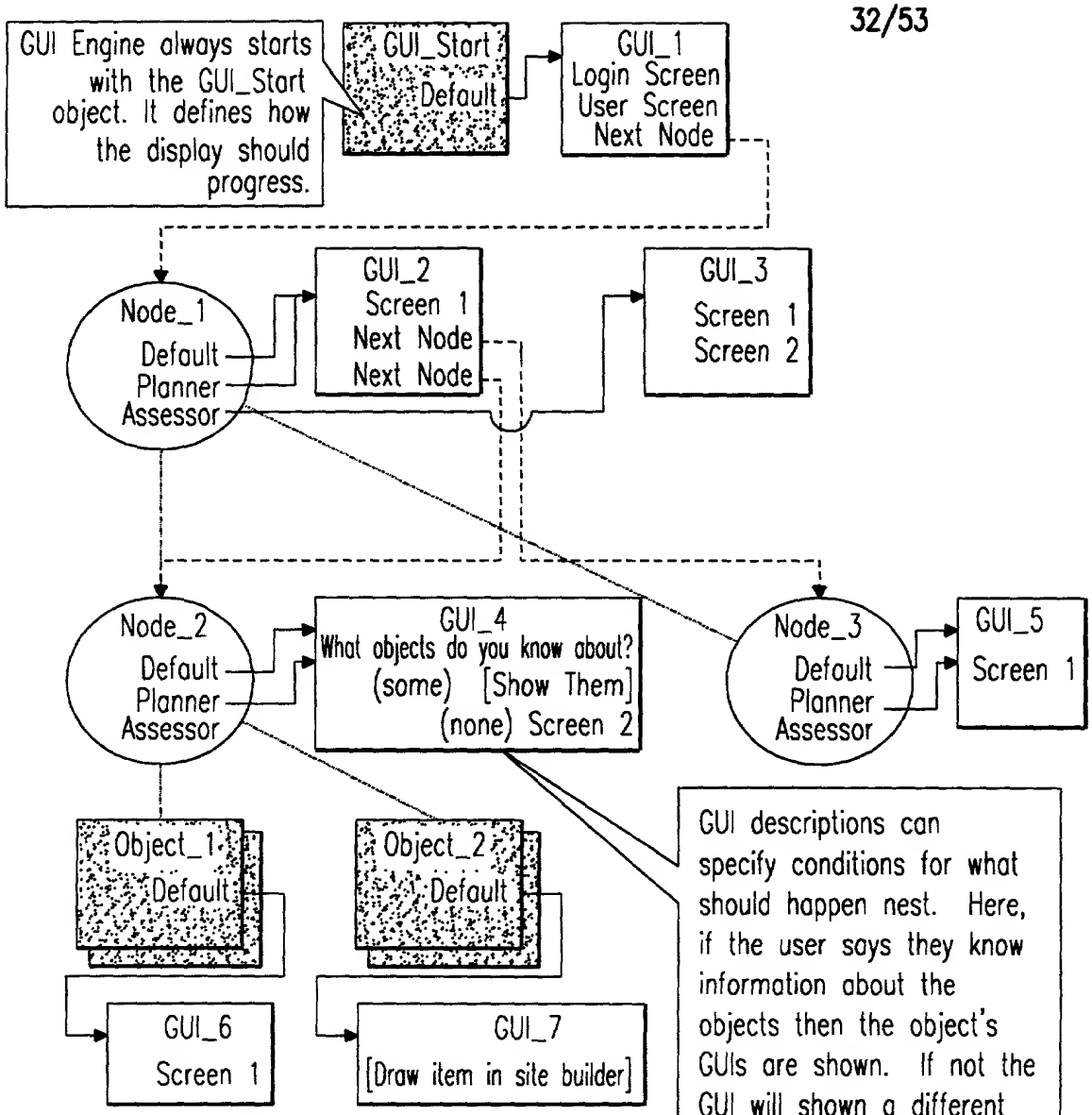
Title for the screen

Screen Definition				
Type	Prompts	Format	Data	Data Modifier
TITLE	User Information	BOLD	–	–
INPUT	Please enter your name:	–	User.Name	–
INPUT	Please enter your military ID number:	–	User.ID	–
INPUT	Please select your rank:	–	User.Rank	Ranks[Service.Type]
INPUT	Please enter you age:	–	User.Age	2
BREAK	–	–	–	–
NAV_IN	–	–	Team	–
TITLE	Assessment Information	BOLD	–	–
INPUT	Please enter the name of the base:	–	Assessment.Name	–
INPUT	Please select the date for the assessment:	–	Assessment.StartDate	–

Data items the user needs to input with prompts to show beside them

Explicite navigational instructions to the GUI Engine to override the default flow of screens

FIG.31



In this example the screens are shown in the following order:
GUI_1
GUI_2 *
GUI_5 **
GUI_4
GUI_6 ***
GUI_7
Site Builder ****

* Assuming the user is a planner

** GUI_2 specifies Node_3 comes before Node_2

*** GUI_4 does not specify where to go next, so the engine moves down the tree to find relationships.

**** GUI_7 specifies to use the Site Builder to define the object

Legend

- Node in the Node Tree
- GUI description object
- Object in the Data Model
- Node Tree relationship
- Pointer to a GUI Description
- Pointer back to a node

FIG.32

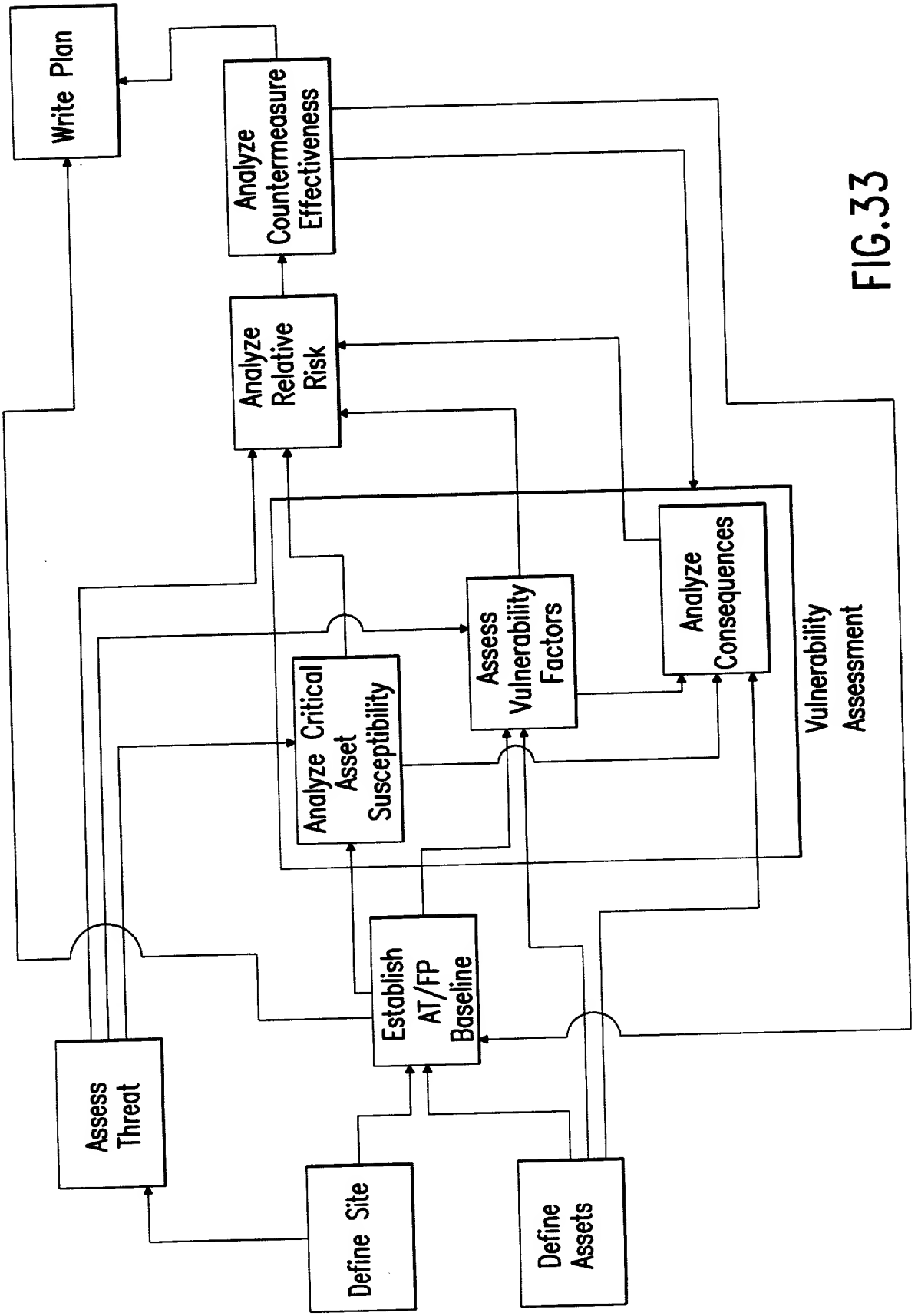

Write Plan
Analyze Countermeasure Effectiveness
Analyze Relative Risk
Assess Vulnerability Factors
Analyze Consequences
Analyze Critical Asset Susceptibility
Vulnerability Assessment
Establish AT/FP Baseline
Assess Threat
Define Site
Define Assets

FIG.33

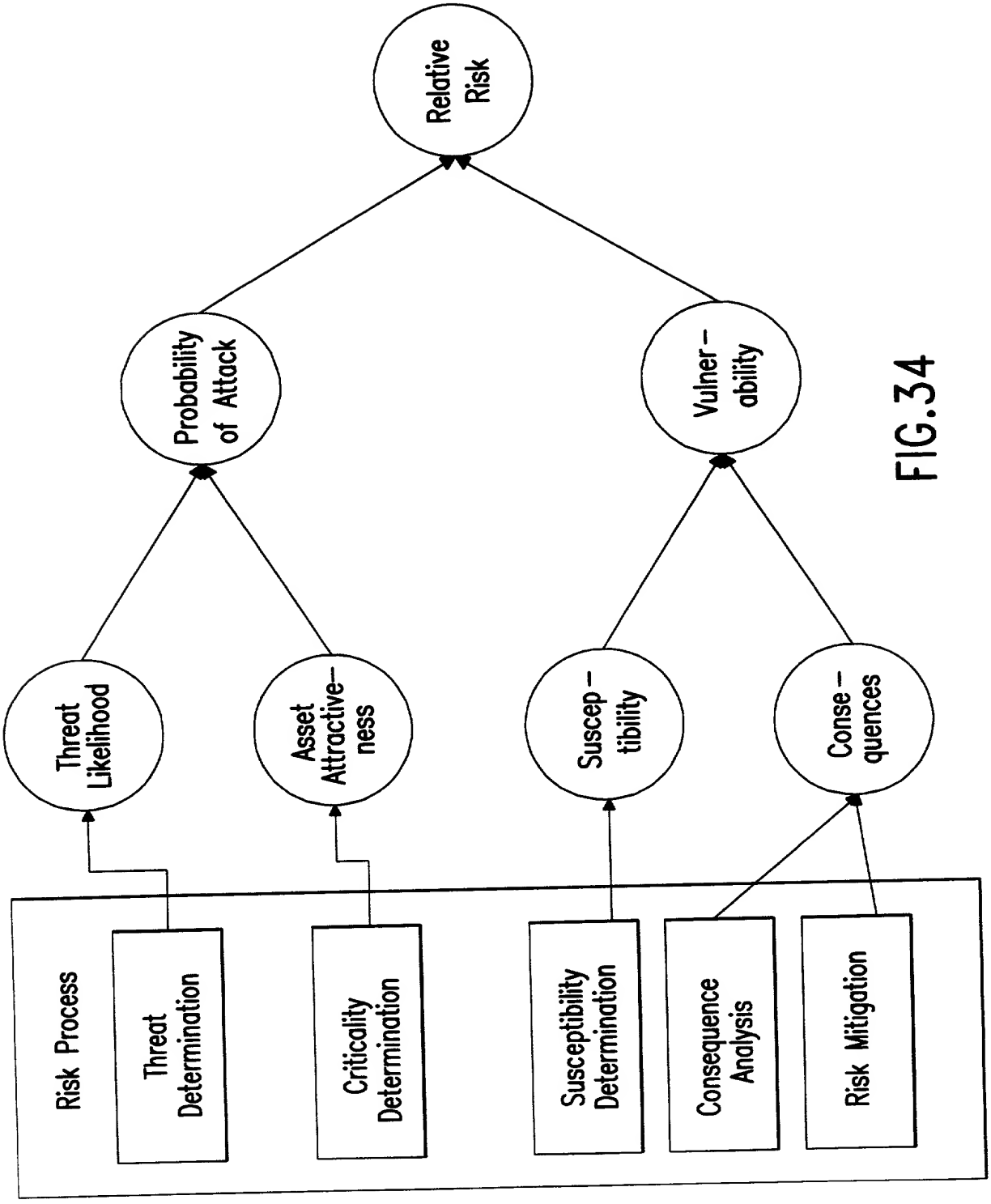

Relative Risk
Probability of Attack
Vulner-ability
Threat Likelihood
Asset Attractive-ness
Suscep-tibility
Conse-quences
Risk Process
Threat Determination
Criticality Determination
Susceptibility Determination
Consequence Analysis
Risk Mitigation

FIG.34

Patent Pending

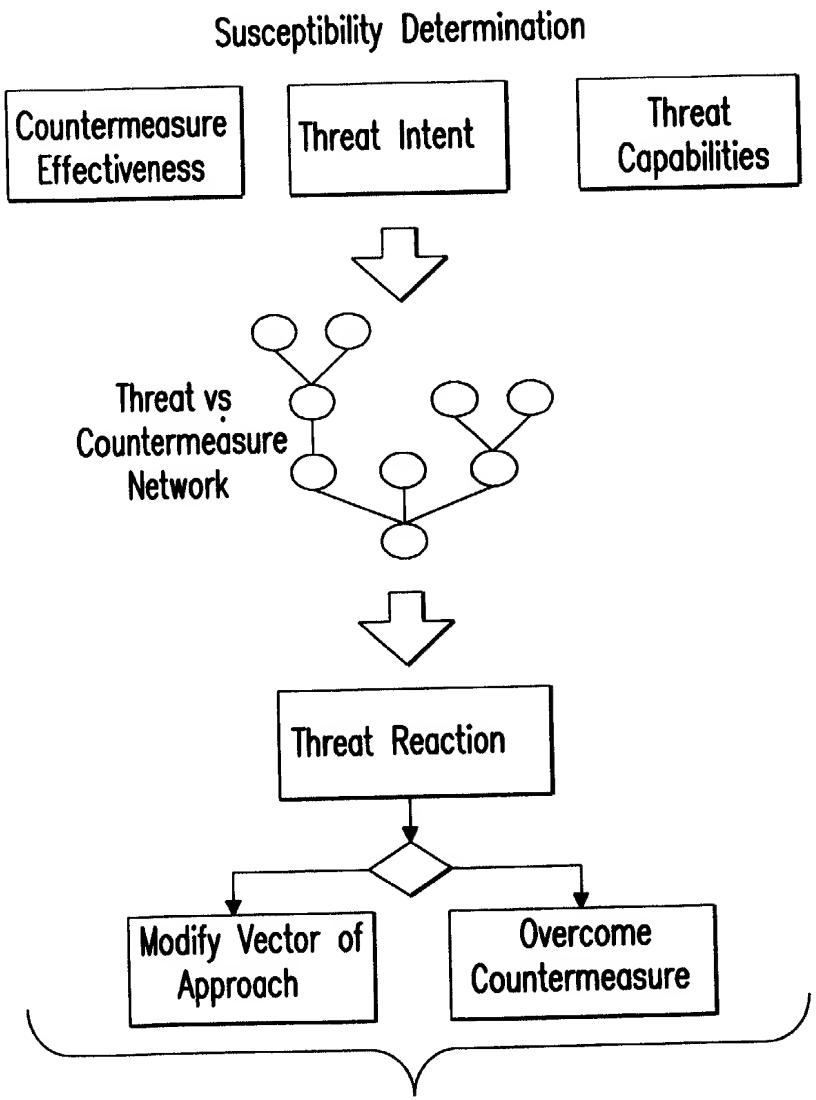


FIG.35a

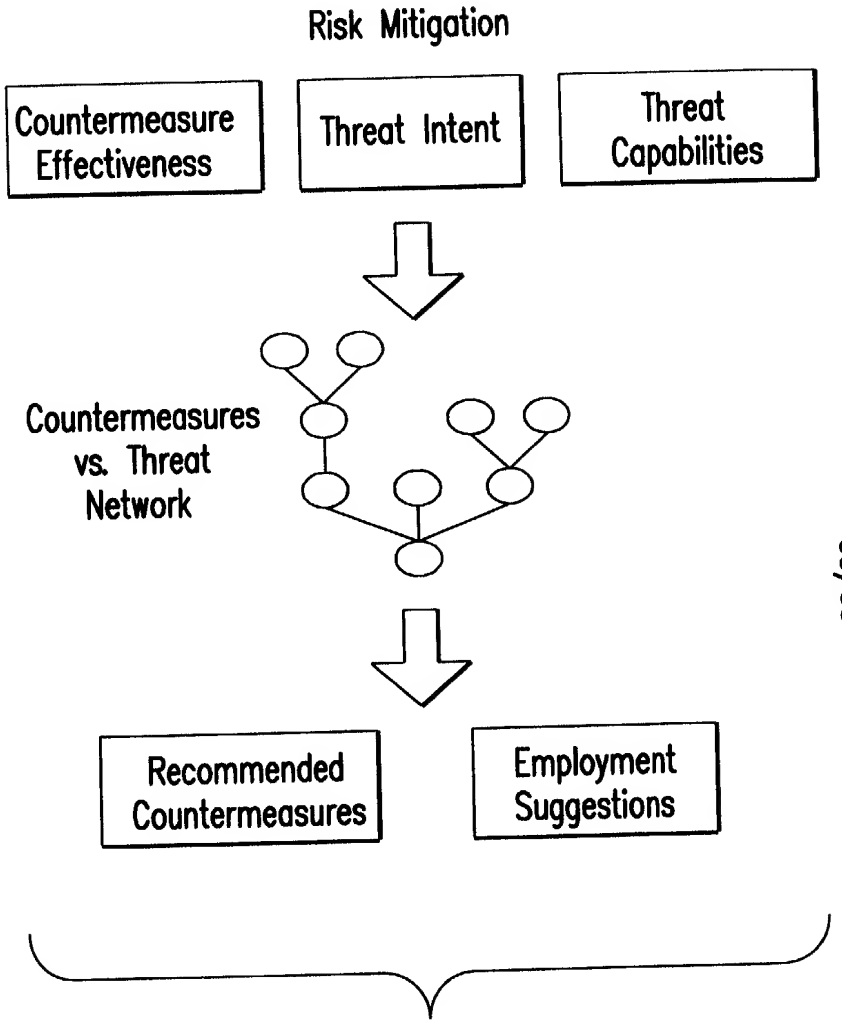


FIG.35b

TOP SECRET//SCI

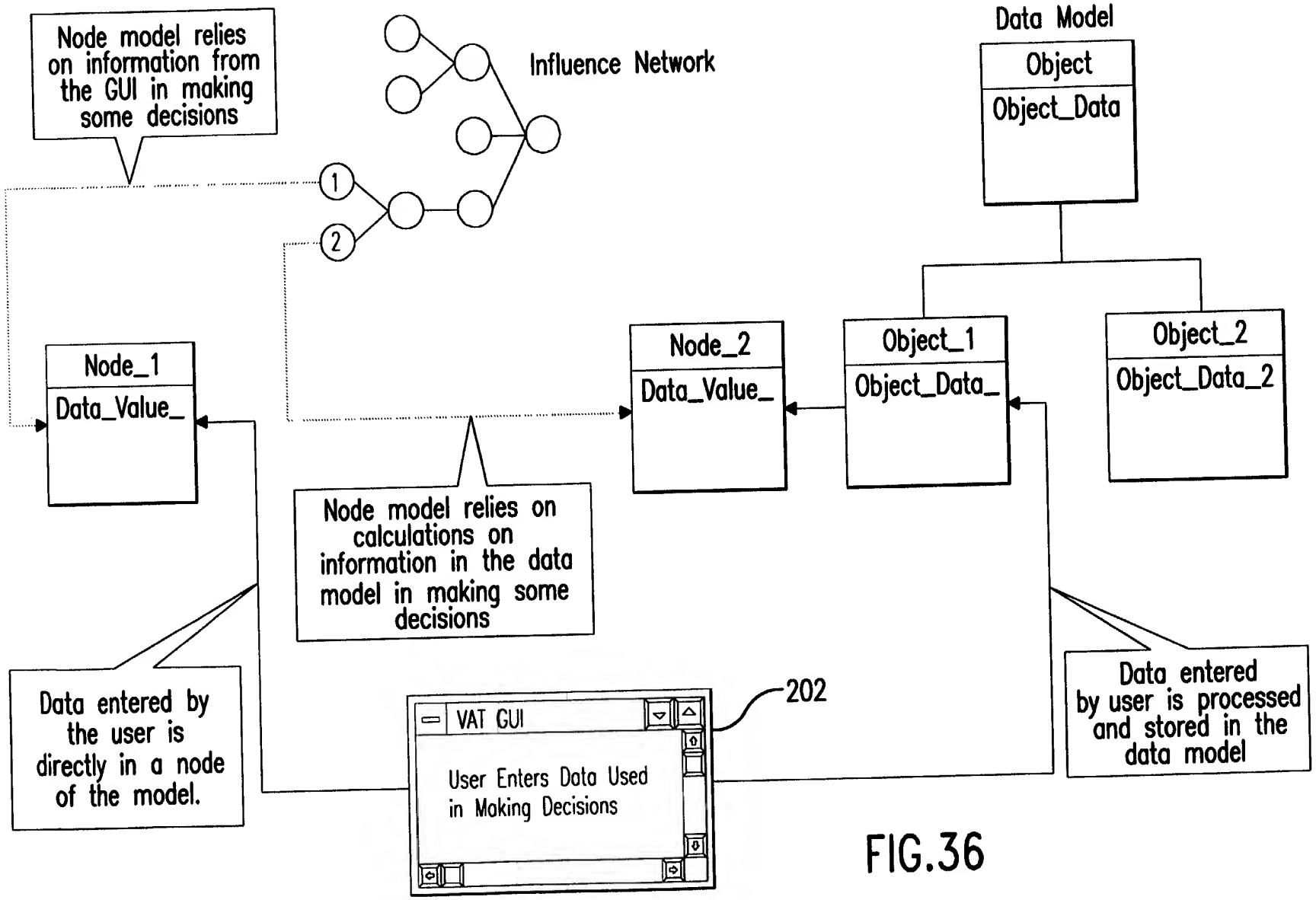


FIG.36

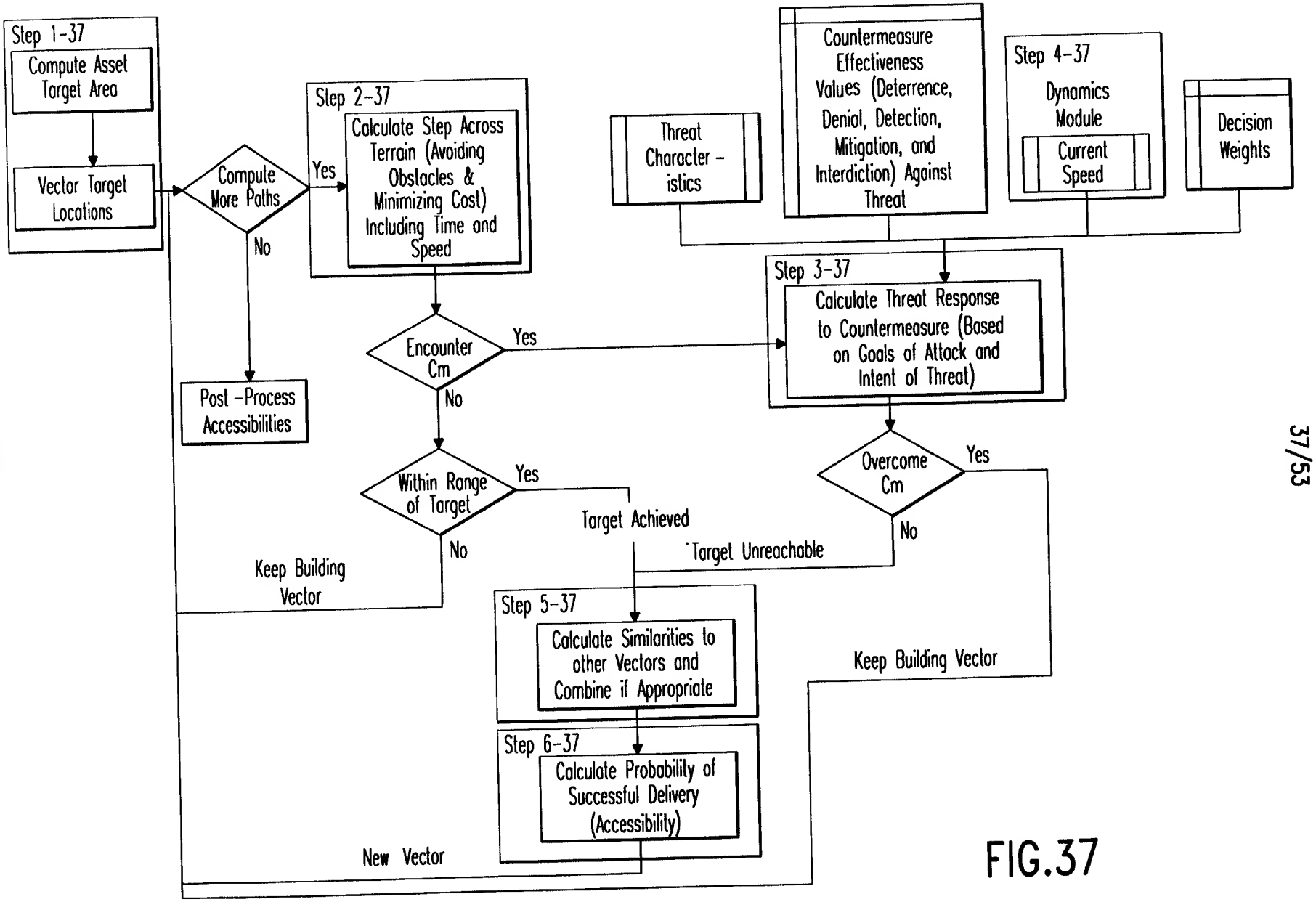

Step 1-37
Compute Asset Target Area
Vector Target Locations
Compute More Paths
Yes
No
Step 2-37
Calculate Step Across Terrain (Avoiding Obstacles & Minimizing Cost) Including Time and Speed
Threat Character - istics
Countermeasure Effectiveness Values (Deterrence, Denial, Detection, Mitigation, and Interdiction) Against Threat
Step 4-37
Dynamics Module
Current Speed
Decision Weights
Step 3-37
Calculate Threat Response to Countermeasure (Based on Goals of Attack and Intent of Threat)
Encounter Cm
Yes
No
Post - Process Accessibilities
Within Range of Target
Yes
No
Target Achieved
Target Unreachable
Overcome Cm
Yes
No
Keep Building Vector
Keep Building Vector
Step 5-37
Calculate Similarities to other Vectors and Combine if Appropriate
Step 6-37
Calculate Probability of Successful Delivery (Accessibility)
New Vector

FIG.37

Contact Assistant

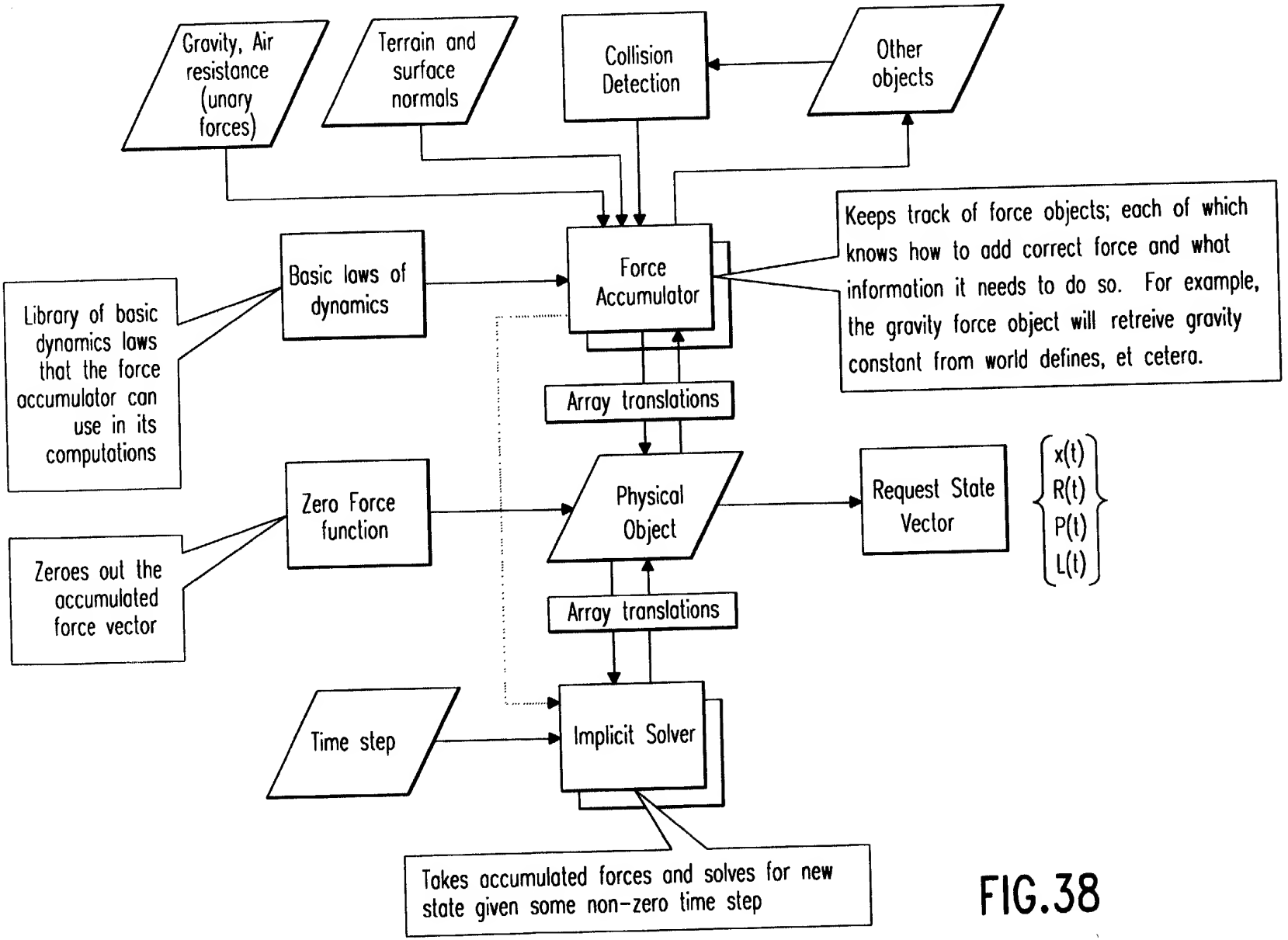


FIG.38

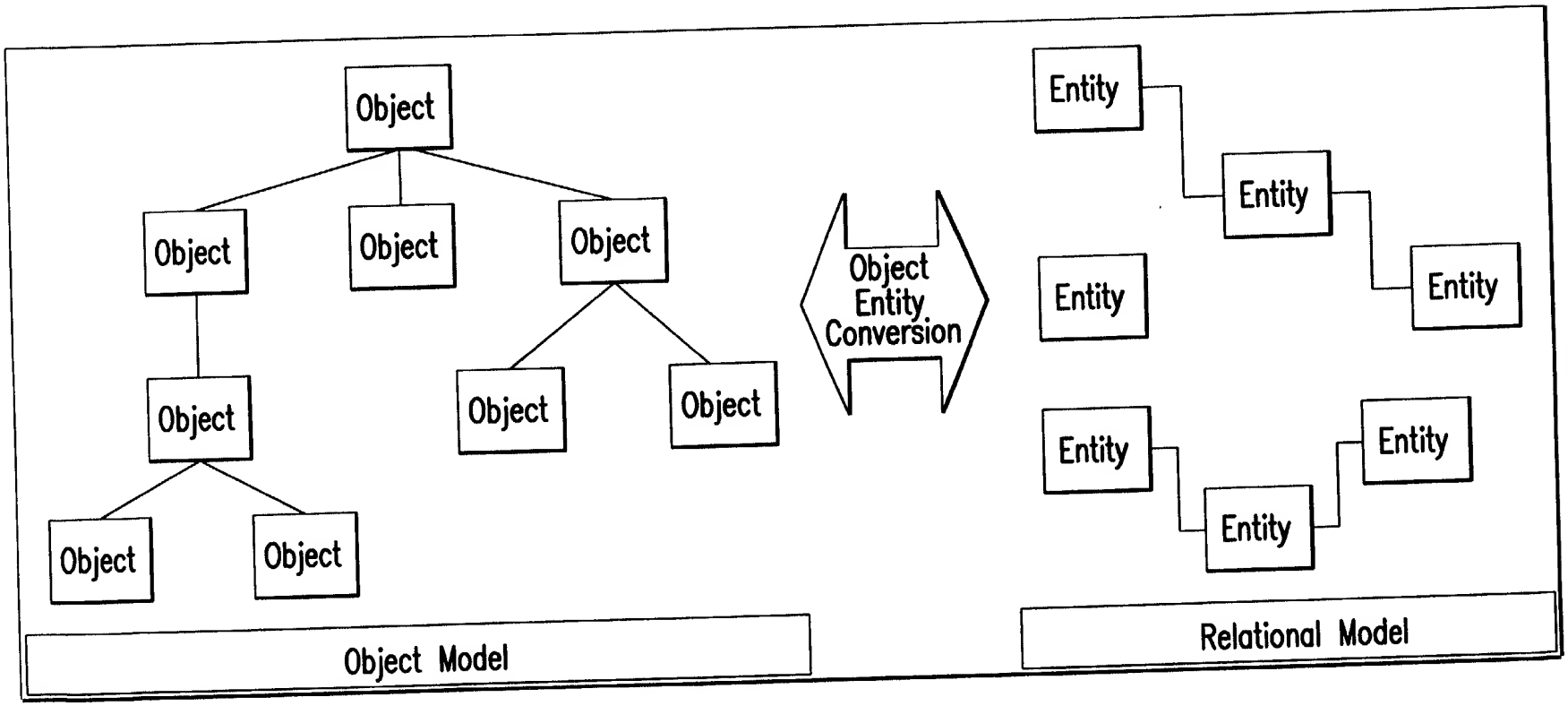

Object
Object
Object
Object
Object
Object
Object
Object
Object Entity Conversion
Entity
Entity
Entity
Entity
Entity
Entity
Entity
Object Model
Relational Model

FIG.39

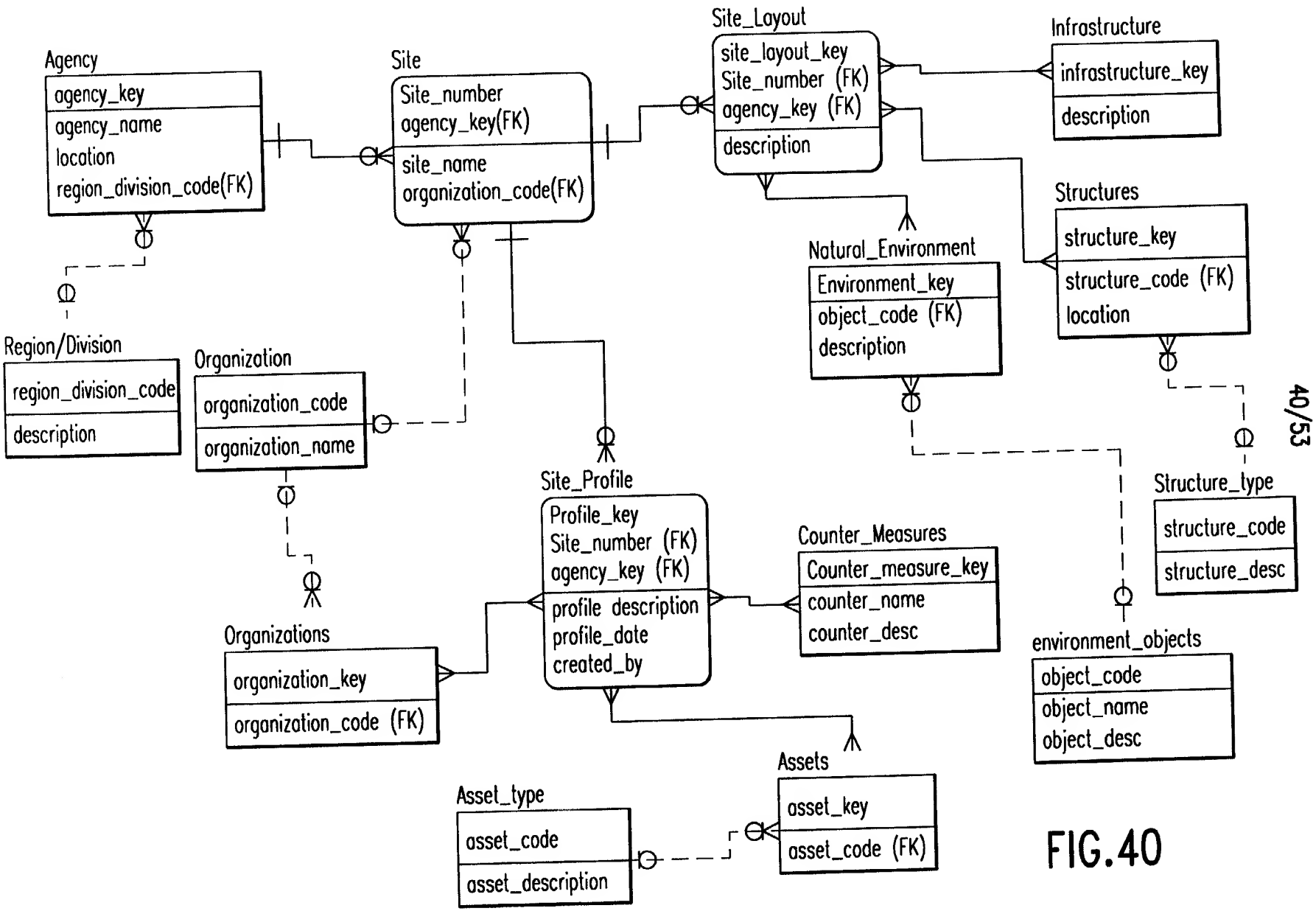

Agency
agency_key
agency_name
location
region_division_code(FK)
Site
Site_number
agency_key(FK)
site_name
organization_code(FK)
Site_Layout
site_layout_key
Site_number (FK)
agency_key (FK)
description
Infrastructure
infrastructure_key
description
Structures
structure_key
structure_code (FK)
location
Natural_Environment
Environment_key
object_code (FK)
description
Region/Division
region_division_code
description
Organization
organization_code
organization_name
Site_Profile
Profile_key
Site_number (FK)
agency_key (FK)
profile description
profile_date
created_by
Counter_Measures
Counter_measure_key
counter_name
counter_desc
Structure_type
structure_code
structure_desc
Organizations
organization_key
organization_code (FK)
environment_objects
object_code
object_name
object_desc
Assets
asset_key
asset_code (FK)
Asset_type
asset_code
asset_description

FIG.40

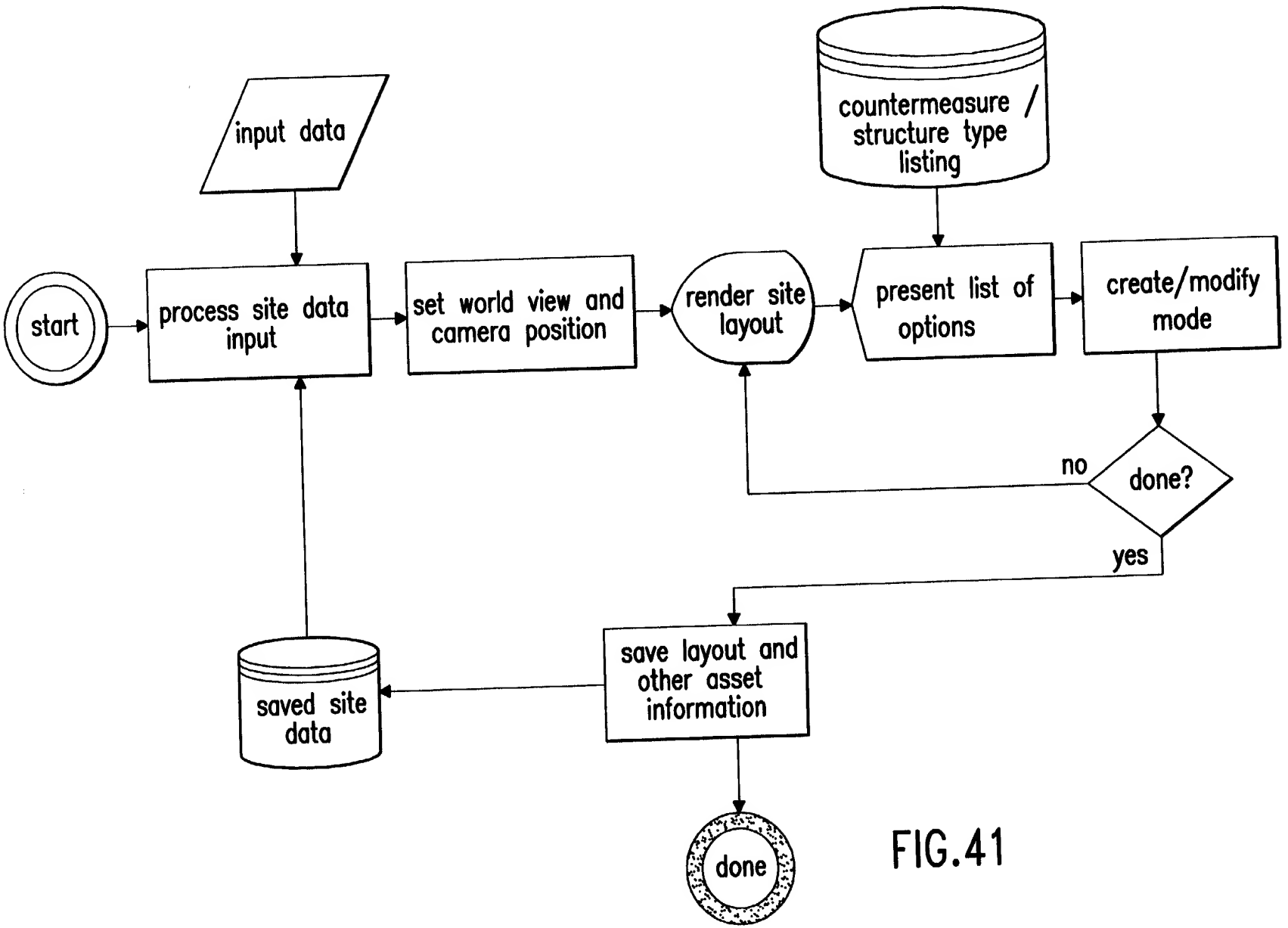

input data
countermeasure / structure type listing
start
process site data input
set world view and camera position
render site layout
present list of options
create/modify mode
no
done?
yes
saved site data
save layout and other asset information
done

FIG.41

Patent application

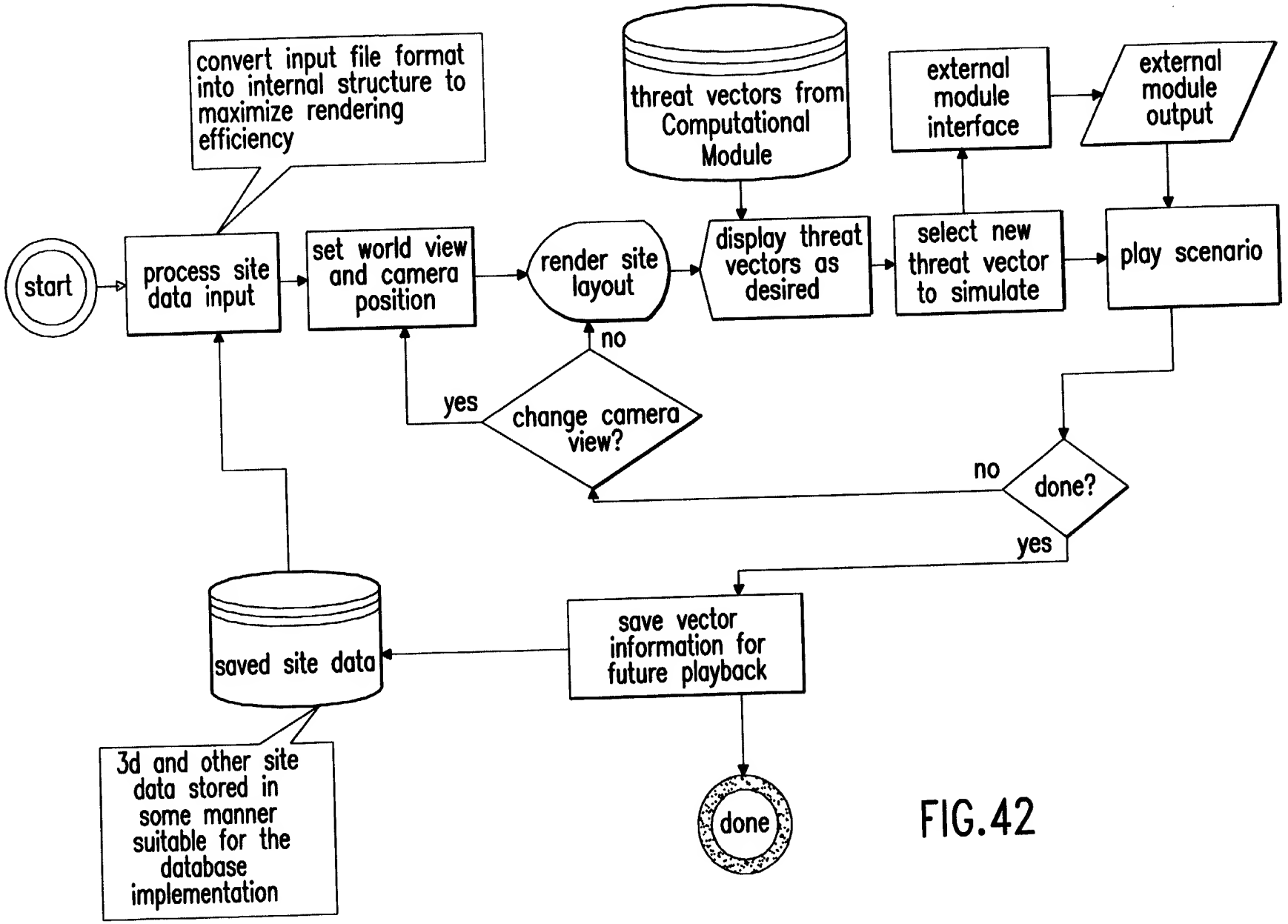


FIG.42

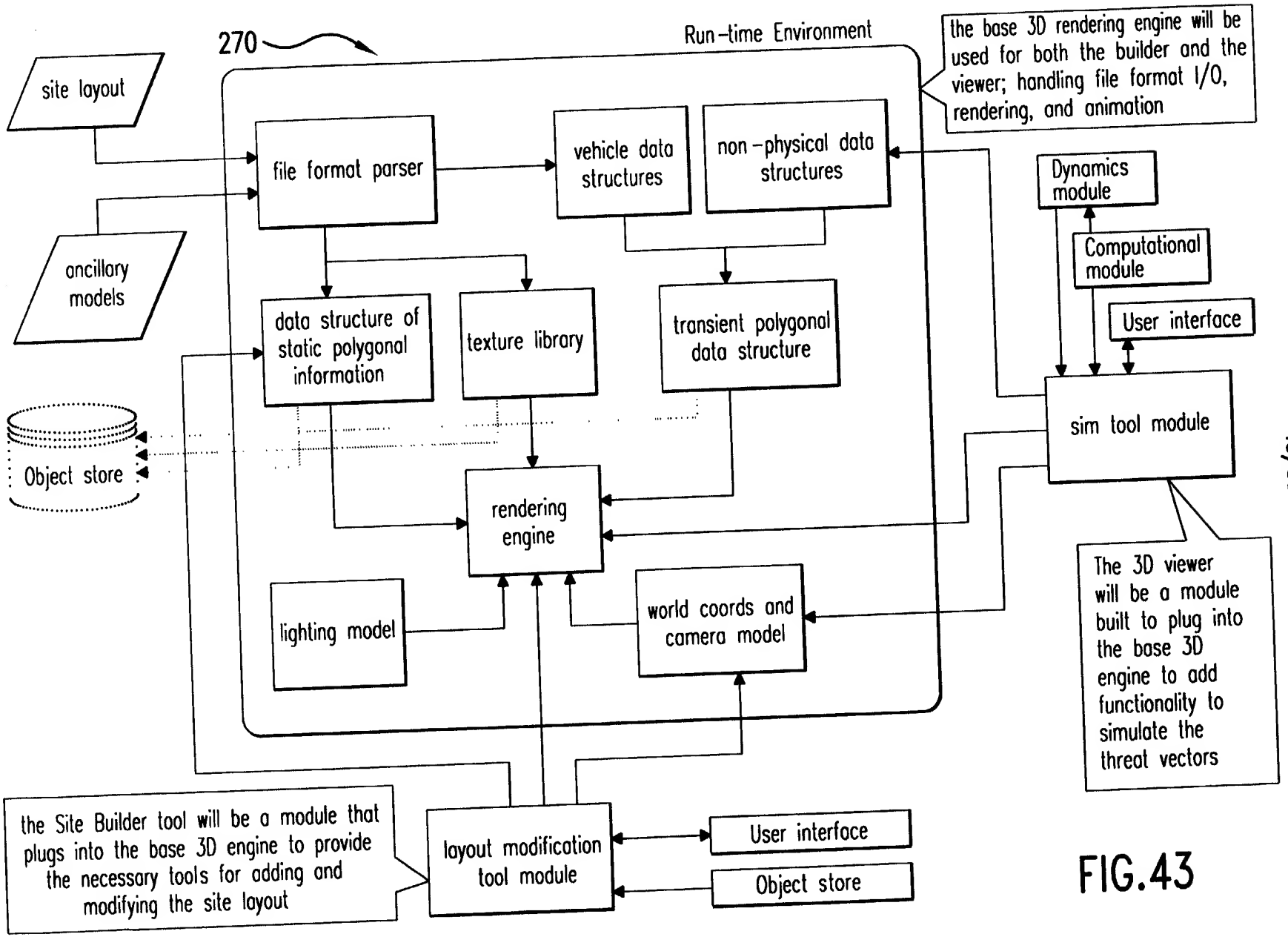

270
Run-time Environment
site layout
ancillary models
file format parser
vehicle data structures
non-physical data structures
data structure of static polygonal information
texture library
transient polygonal data structure
Object store
rendering engine
lighting model
world coords and camera model
the base 3D rendering engine will be used for both the builder and the viewer; handling file format I/O, rendering, and animation
Dynamics module
Computational module
User interface
sim tool module
The 3D viewer will be a module built to plug into the base 3D engine to add functionality to simulate the threat vectors
the Site Builder tool will be a module that plugs into the base 3D engine to provide the necessary tools for adding and modifying the site layout
layout modification tool module
User interface
Object store

FIG.43

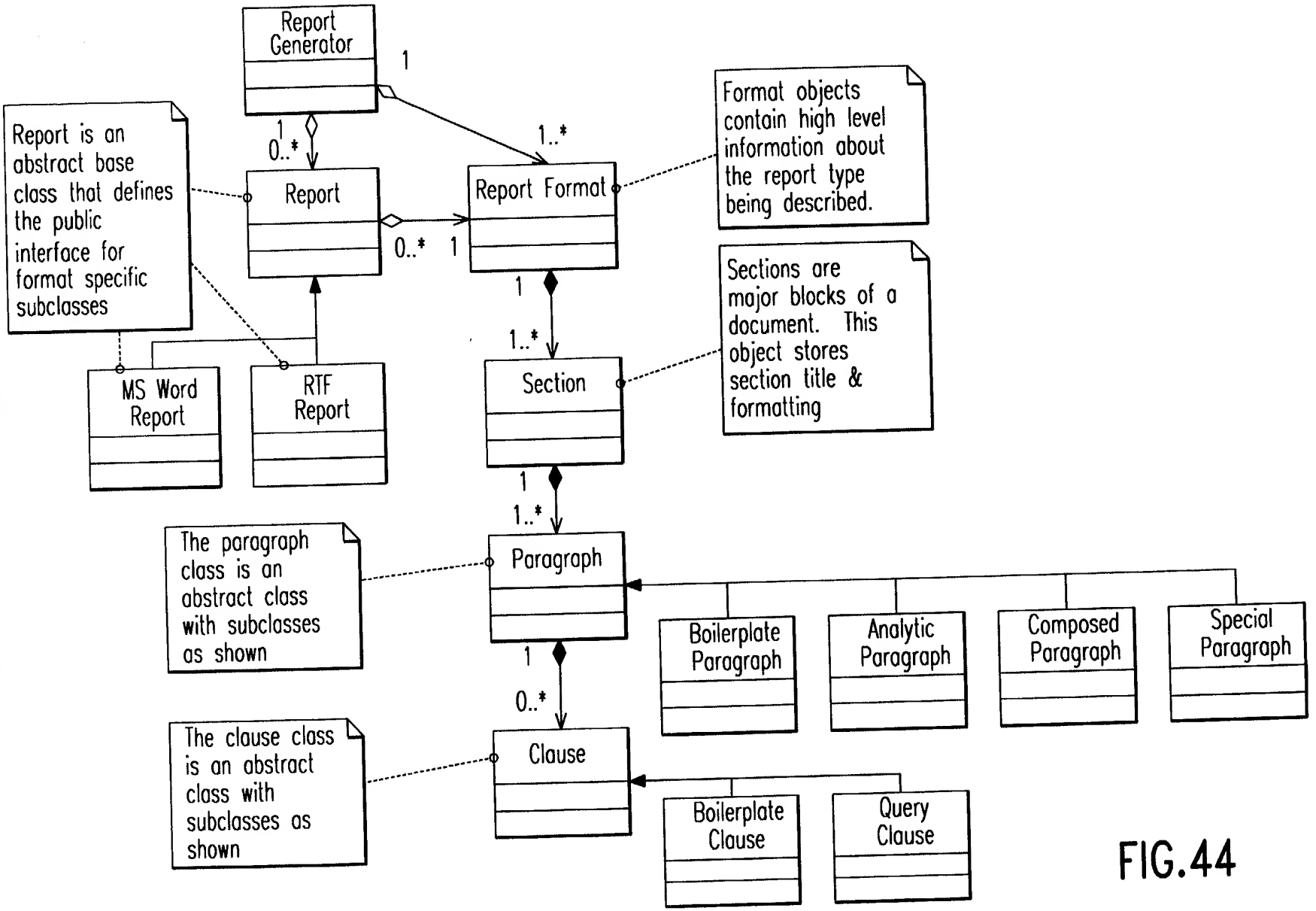

Report Generator
1
1
0..*
1..*
Report is an abstract base class that defines the public interface for format specific subclasses
Report
Report Format
Format objects contain high level information about the report type being described.
0..*
1
1
1..*
Sections are major blocks of a document. This object stores section title & formatting
MS Word Report
RTF Report
Section
1
1..*
The paragraph class is an abstract class with subclasses as shown
Paragraph
Boilerplate Paragraph
Analytic Paragraph
Composed Paragraph
Special Paragraph
1
0..*
The clause class is an abstract class with subclasses as shown
Clause
Boilerplate Clause
Query Clause

FIG.44

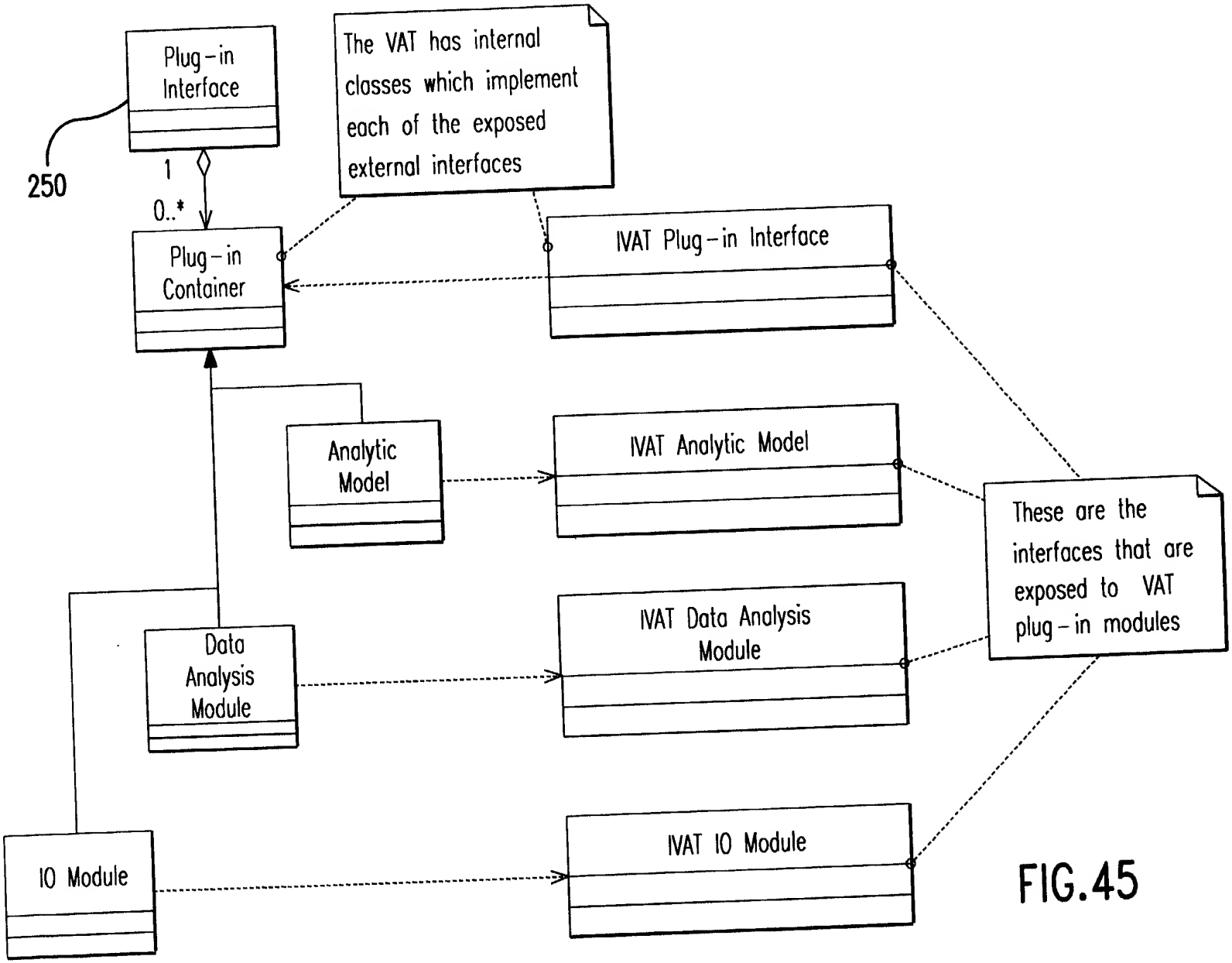

Plug-in Interface
250
1
0..*
Plug-in Container
The VAT has internal classes which implement each of the exposed external interfaces
IVAT Plug-in Interface
Analytic Model
IVAT Analytic Model
These are the interfaces that are exposed to VAT plug-in modules
Data Analysis Module
IVAT Data Analysis Module
IO Module
IVAT IO Module

FIG.45

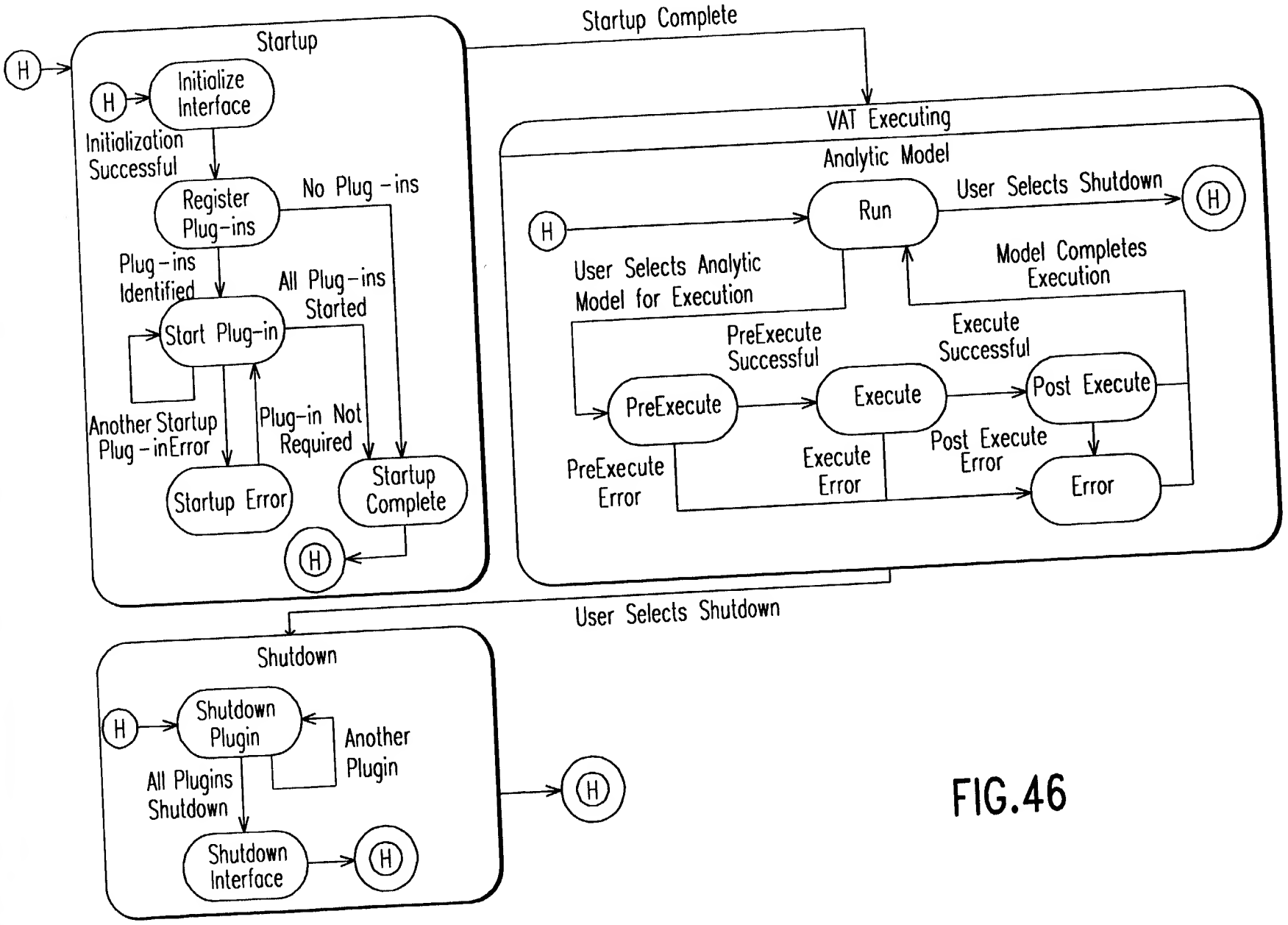

Startup
H
Initialize Interface
Initialization Successful
Register Plug-ins
No Plug-ins
Plug-ins Identified
All Plug-ins Started
Start Plug-in
Another Startup Plug-inError
Plug-in Not Required
Startup Error
Startup Complete
Startup Complete
VAT Executing
Analytic Model
Run
User Selects Shutdown
User Selects Analytic Model for Execution
Model Completes Execution
PreExecute Successful
Execute Successful
PreExecute
Execute
Post Execute
PreExecute Error
Execute Error
Post Execute Error
Error
User Selects Shutdown
Shutdown
Shutdown Plugin
Another Plugin
All Plugins Shutdown
Shutdown Interface

FIG.46

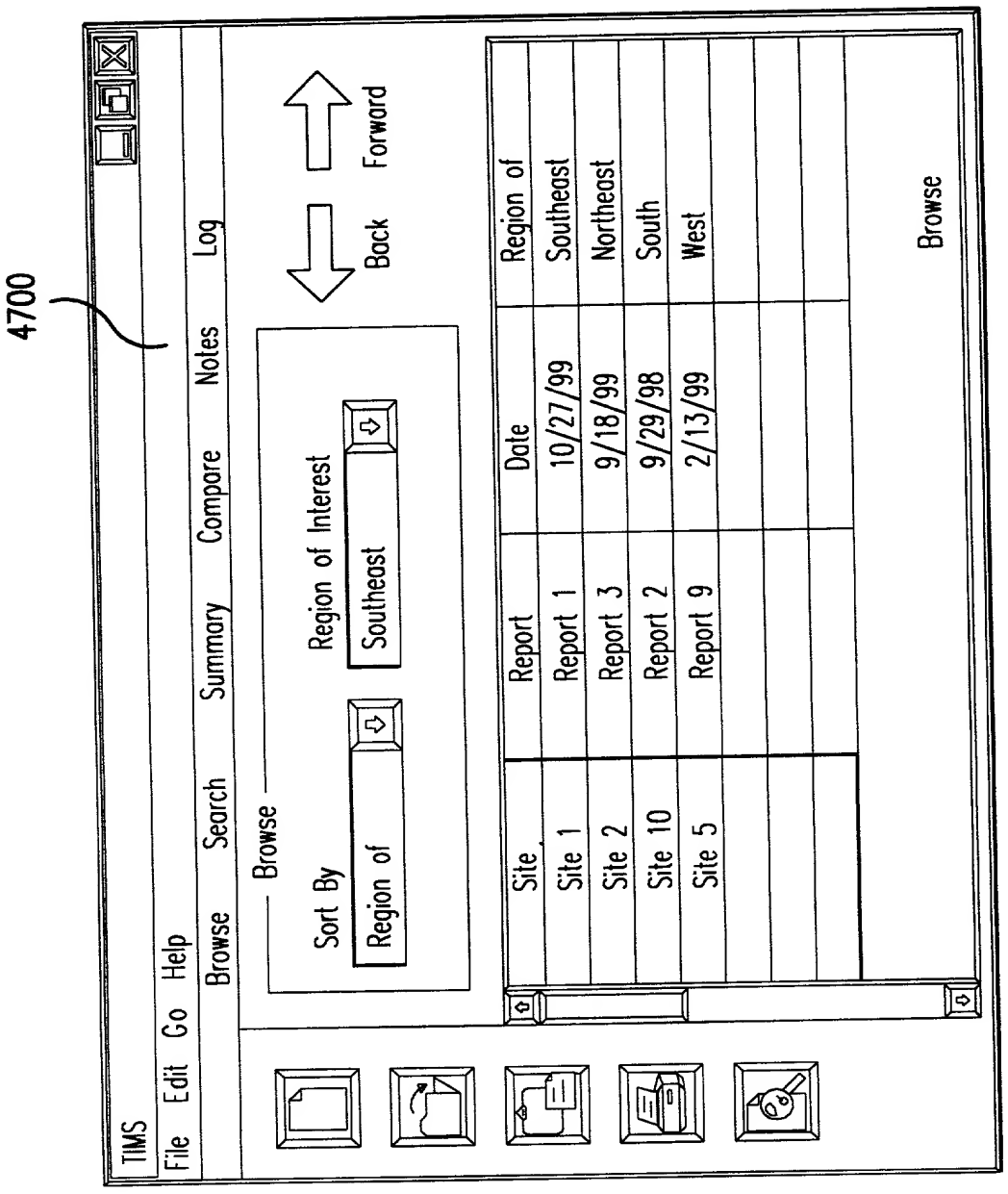

4700
TIMS
File Edit Go Help
Browse Search Summary Compare Notes Log
Browse
Sort By
Region of
Region of Interest
Southeast
Back
Forward
Site
Report
Date
Region of
Site 1
Report 1
10/27/99
Southeast
Site 2
Report 3
9/18/99
Northeast
Site 10
Report 2
9/29/98
South
Site 5
Report 9
2/13/99
West
Browse

FIG.47

Protected Document

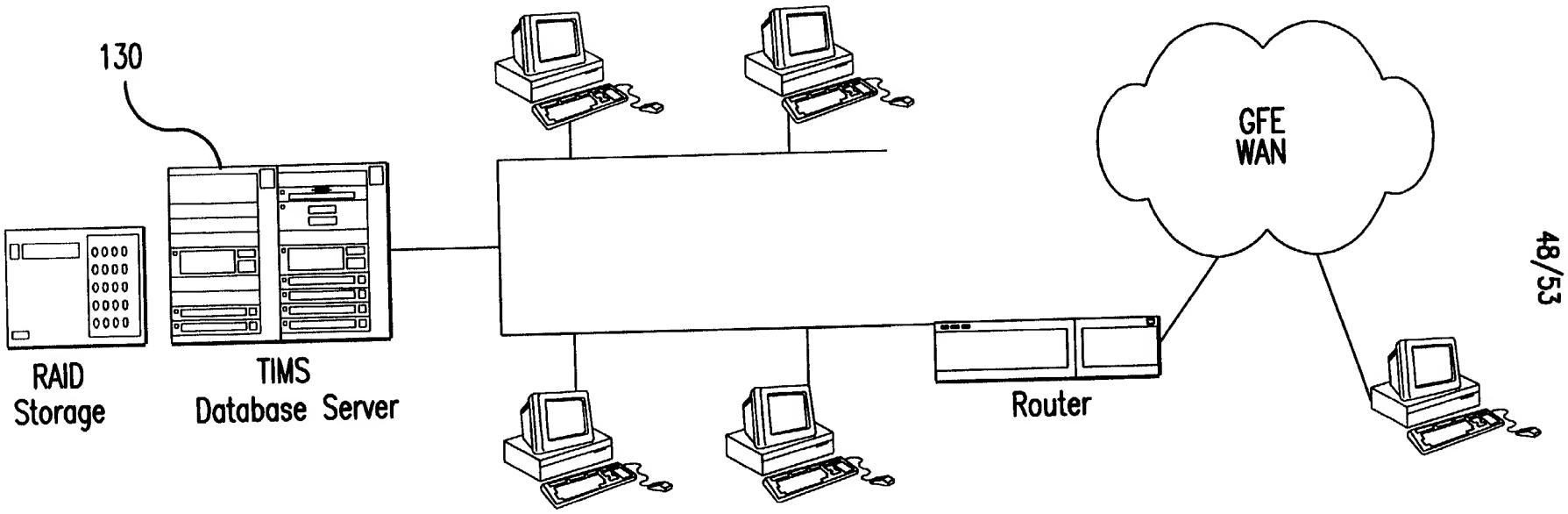


FIG.48

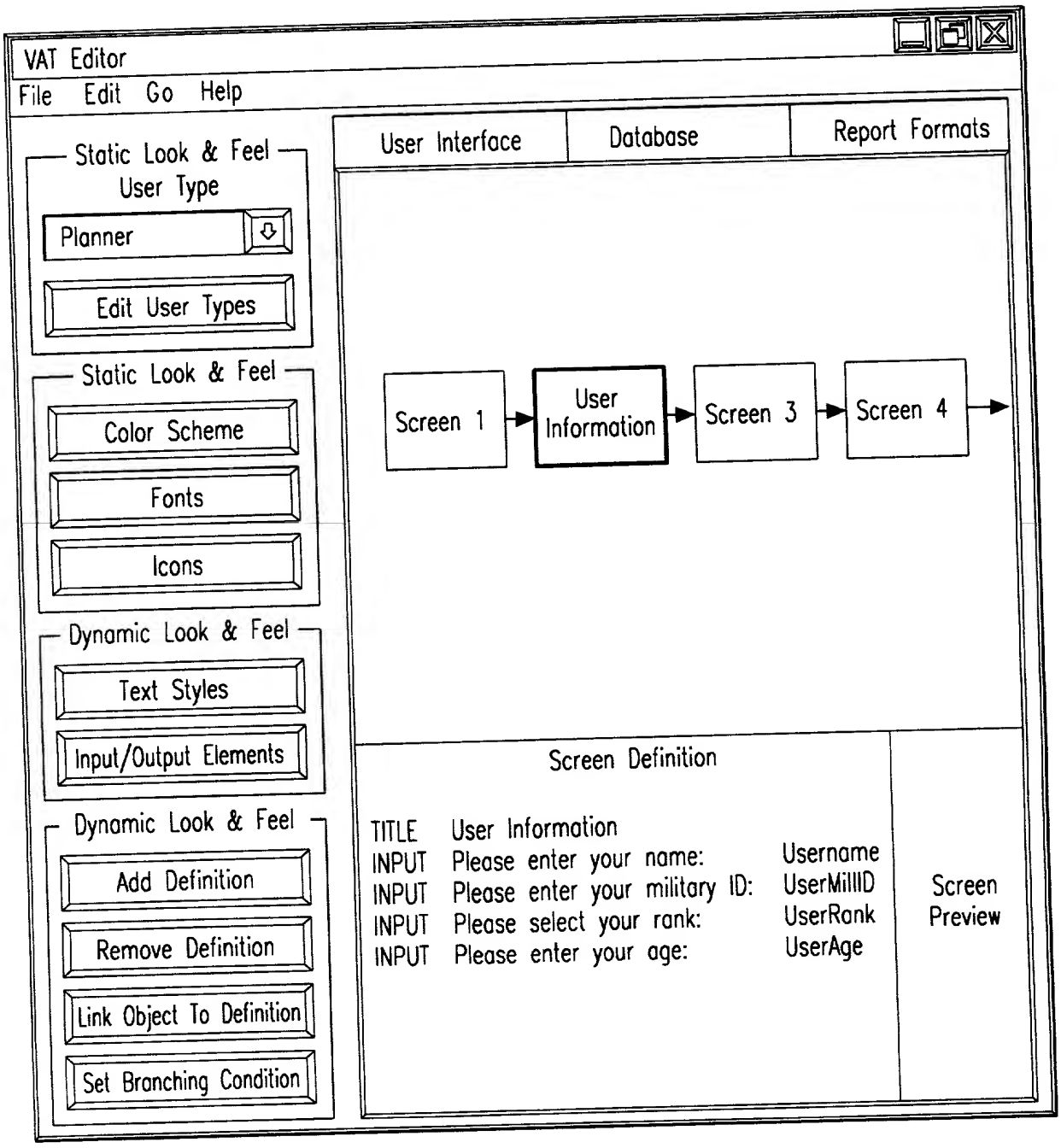

VAT Editor
File Edit Go Help
Static Look & Feel
User Type
Planner
Edit User Types
Static Look & Feel
Color Scheme
Fonts
Icons
Dynamic Look & Feel
Text Styles
Input/Output Elements
Dynamic Look & Feel
Add Definition
Remove Definition
Link Object To Definition
Set Branching Condition
User Interface
Database
Report Formats
Screen 1
User Information
Screen 3
Screen 4
Screen Definition
TITLE User Information
INPUT Please enter your name: Username
INPUT Please enter your military ID: UserMilIID
INPUT Please select your rank: UserRank
INPUT Please enter your age: UserAge
Screen Preview

FIG.49

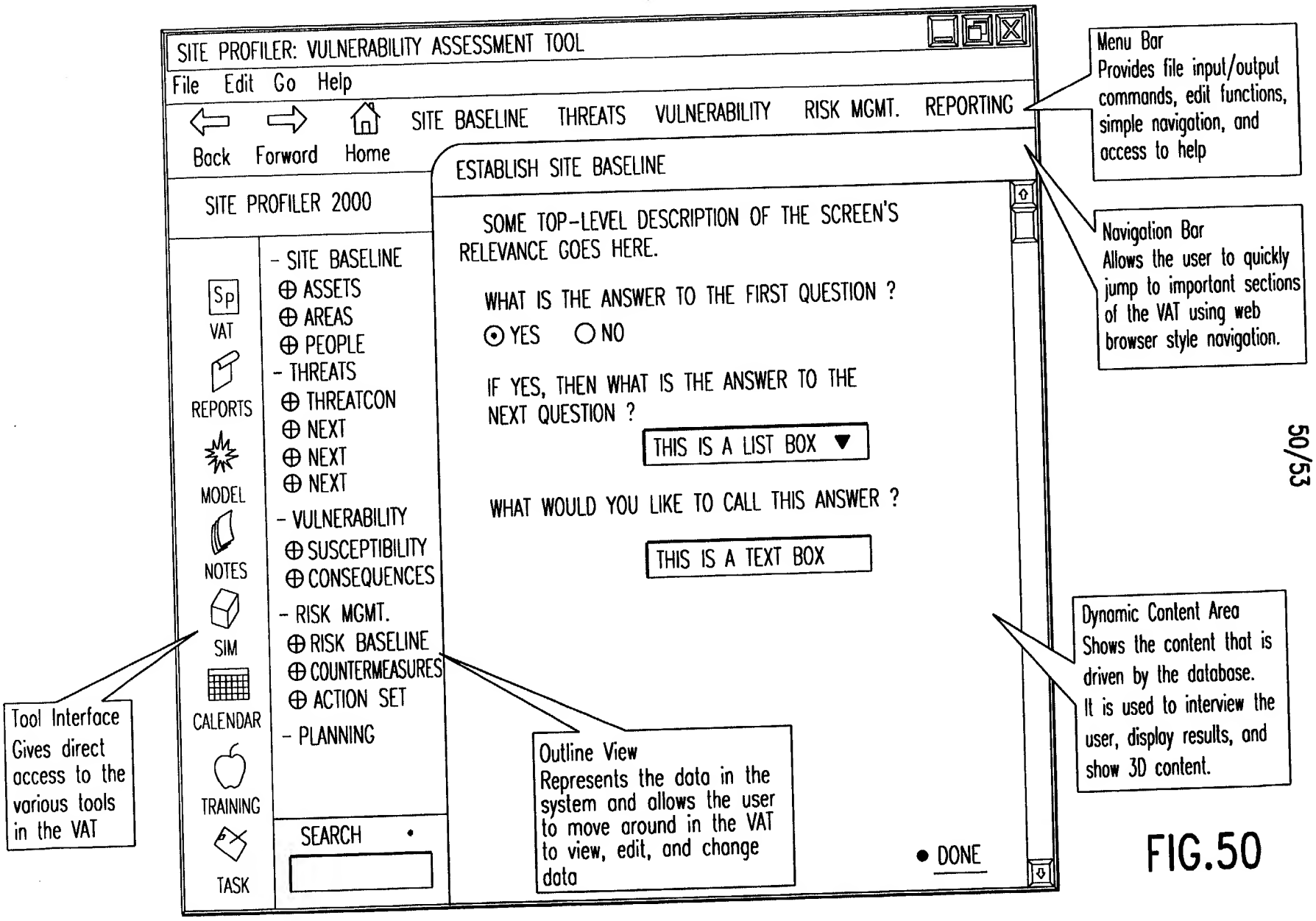

SITE PROFILER: VULNERABILITY ASSESSMENT TOOL
File Edit Go Help
Back Forward Home
SITE BASELINE THREATS VULNERABILITY RISK MGMT. REPORTING
SITE PROFILER 2000
ESTABLISH SITE BASELINE
SOME TOP-LEVEL DESCRIPTION OF THE SCREEN'S RELEVANCE GOES HERE.
WHAT IS THE ANSWER TO THE FIRST QUESTION ?
YES NO
IF YES, THEN WHAT IS THE ANSWER TO THE NEXT QUESTION ?
THIS IS A LIST BOX
WHAT WOULD YOU LIKE TO CALL THIS ANSWER ?
THIS IS A TEXT BOX
VAT
REPORTS
MODEL
NOTES
SIM
CALENDAR
TRAINING
TASK
- SITE BASELINE
⊕ ASSETS
⊕ AREAS
⊕ PEOPLE
- THREATS
⊕ THREATCON
⊕ NEXT
⊕ NEXT
⊕ NEXT
- VULNERABILITY
⊕ SUSCEPTIBILITY
⊕ CONSEQUENCES
- RISK MGMT.
⊕ RISK BASELINE
⊕ COUNTERMEASURES
⊕ ACTION SET
- PLANNING
SEARCH
DONE
Menu Bar
Provides file input/output commands, edit functions, simple navigation, and access to help
Navigation Bar
Allows the user to quickly jump to important sections of the VAT using web browser style navigation.
Dynamic Content Area
Shows the content that is driven by the database. It is used to interview the user, display results, and show 3D content.
Tool Interface
Gives direct access to the various tools in the VAT
Outline View
Represents the data in the system and allows the user to move around in the VAT to view, edit, and change data

FIG.50

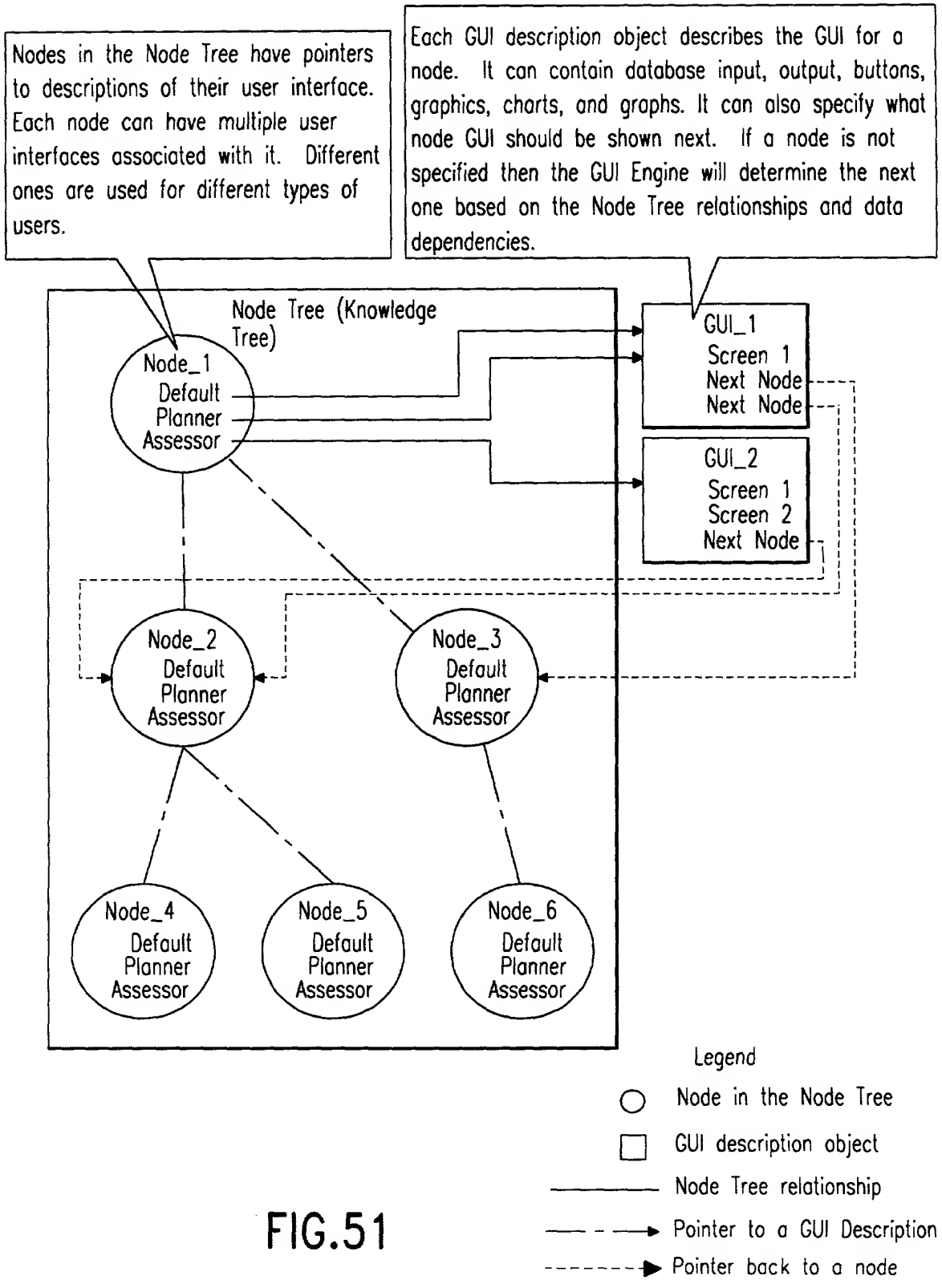

Nodes in the Node Tree have pointers to descriptions of their user interface. Each node can have multiple user interfaces associated with it. Different ones are used for different types of users.
Each GUI description object describes the GUI for a node. It can contain database input, output, buttons, graphics, charts, and graphs. It can also specify what node GUI should be shown next. If a node is not specified then the GUI Engine will determine the next one based on the Node Tree relationships and data dependencies.
Node Tree (Knowledge Tree)
Node_1
Default
Planner
Assessor
GUI_1
Screen 1
Next Node
Next Node
GUI_2
Screen 1
Screen 2
Next Node
Node_2
Default
Planner
Assessor
Node_3
Default
Planner
Assessor
Node_4
Default
Planner
Assessor
Node_5
Default
Planner
Assessor
Node_6
Default
Planner
Assessor
Legend
Node in the Node Tree
GUI description object
Node Tree relationship
Pointer to a GUI Description
Pointer back to a node

FIG.51

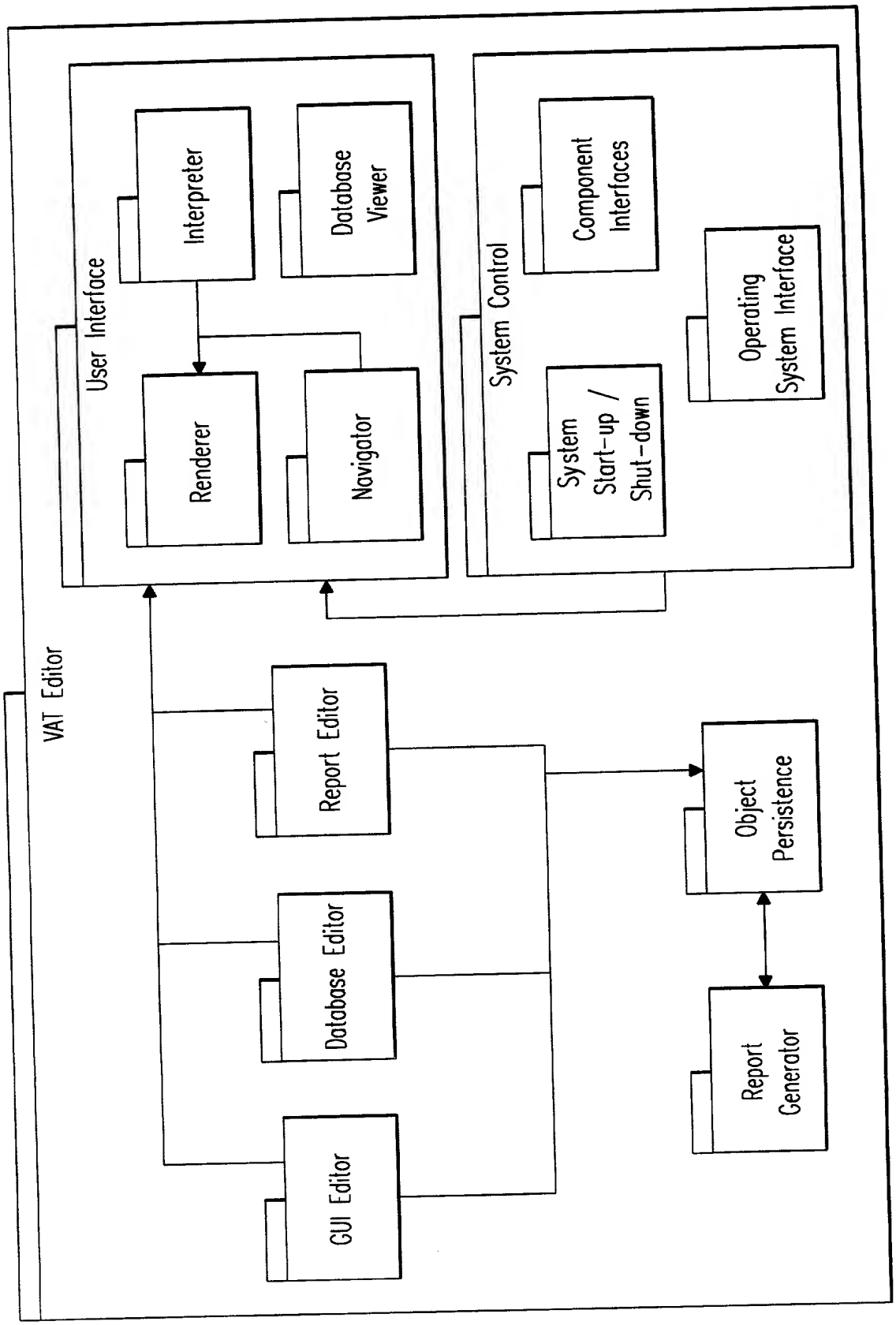

VAT Editor
User Interface
Interpreter
Database Viewer
Renderer
Navigator
System Control
Component Interfaces
Operating System Interface
System Start-up / Shut-down
Report Editor
Database Editor
GUI Editor
Object Persistence
Report Generator

FIG.52

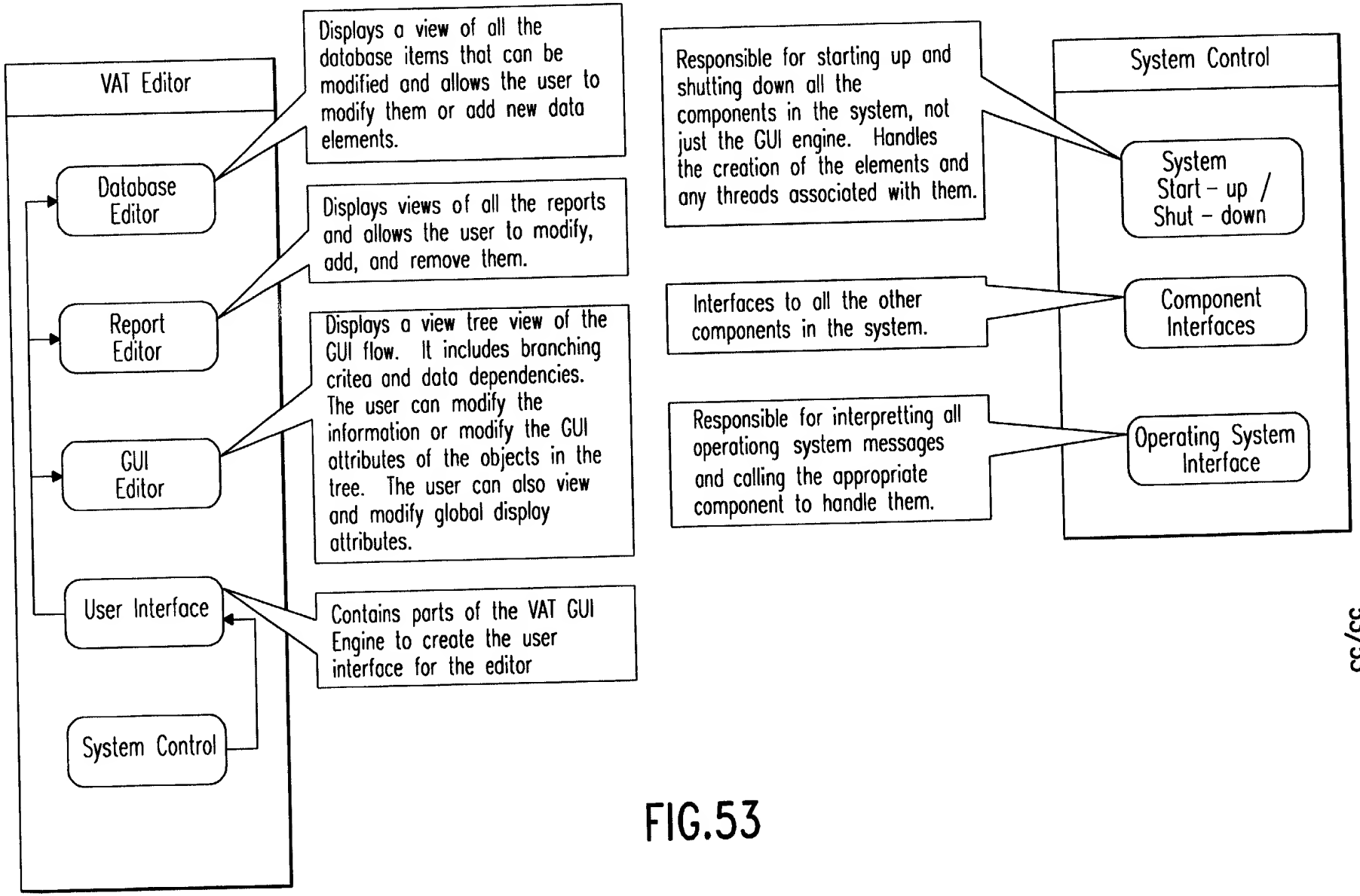

VAT Editor
Database Editor
Report Editor
GUI Editor
User Interface
System Control
Displays a view of all the database items that can be modified and allows the user to modify them or add new data elements.
Displays views of all the reports and allows the user to modify, add, and remove them.
Displays a view tree view of the GUI flow. It includes branching critea and data dependencies. The user can modify the information or modify the GUI attributes of the objects in the tree. The user can also view and modify global display attributes.
Contains parts of the VAT GUI Engine to create the user interface for the editor
System Control
System Start - up / Shut - down
Component Interfaces
Operating System Interface
Responsible for starting up and shutting down all the components in the system, not just the GUI engine. Handles the creation of the elements and any threads associated with them.
Interfaces to all the other components in the system.
Responsible for interpretting all operationg system messages and calling the appropriate component to handle them.

FIG.53